92d Congress, 2d Session - - - - - - - - - House Document No. 92-362

LITTLE RIVER INLET, NORTH CAROLINA AND SOUTH CAROLINA

LETTER

FROM

THE SECRETARY OF THE ARMY

TRANSMITTING

A LETTER FROM THE CHIEF OF ENGINEERS, DEPARTMENT OF THE ARMY, DATED MAY 30, 1972, SUBMITTING A REPORT, TOGETHER WITH ACCOMPANYING PAPERS AND AN ILLUSTRATION, ON LITTLE RIVER INLET, NORTH CAROLINA AND SOUTH CAROLINA, REQUESTED BY A RESOLUTION OF THE COMMITTEE ON PUBLIC WORKS, UNITED STATES SENATE, ADOPTED SEPTEMBER 23, 1965 AND TWO RESOLUTIONS OF THE COMMITTEE ON PUBLIC WORKS, HOUSE OF REPRESENTATIVES, ADOPTED OCTOBER 5, 1966 AND OCTOBER 19, 1967

SEPTEMBER 25, 1972.—Referred to the Committee on Public Works and ordered to be printed with an illustration

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U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1972

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CONTENTS

LETTER OF TRANSMITTAL

DEPARTMENT OF THE ARMY
WASHINGTON, D.C. 20310

September 19, 1972

Honorable Carl Albert
Speaker of the House of Representatives
Washington, D. C. 20515

Dear Mr. Speaker:

I am transmitting herewith a favorable report dated 30 May 1972, from the Chief of Engineers, Department of the Army, together with accompanying papers and an illustration, on Little River Inlet, North Carolina and South Carolina, requested by a resolution of the Committee on Public Works, United States Senate, adopted 23 September 1965 and two resolutions of the Committee on Public Works, House of Representatives, adopted 5 October 1966 and 19 October 1967.

The views of the States of North Carolina and South Carolina, the Departments of the Interior, Transportation, Health, Education and Welfare, and the Environmental Protection Agency are set forth in the inclosed communications. The environmental statement required by the National Environmental Policy Act of 1969 has been submitted to the Council on Environmental Quality.

Since this project meets all the requirements of Section 201 of the Flood Control Act of 1965 and involves little or no controversy, I recommend that the project be approved for appropriations.

The Chief of Engineers has informed me that the use of the currently prescribed interest rate of 5-1/2 percent, in computing annual charges and benefits would result in no substantial change in the benefit-cost ratio.

The Office of Management and Budget advises that there is no objection to the submission of the proposed report to the Congress; however, it states that no commitment can be made at this time as to when any estimate of appropriation would be submitted for construction of the project, if

authorized by the Congress, since this would be governed by the President's budgetary objectives as determined by the then prevailing fiscal situation. A copy of the letter from the Office of Management and Budget is inclosed as part of the report.

Sincerely,

Robert F. Froehlke

1 Incl
As stated

ROBERT F. FROEHLKE
Secretary of the Army

COMMENTS OF THE OFFICE OF MANAGEMENT AND BUDGET

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

August 17, 1972

Honorable Robert F. Froehlke
Secretary of the Army
Washington, D. C. 20310

Dear Mr. Secretary:

Mr. Kenneth BeLieu's letter of August 11, 1972, submitted the favorable report of the Chief of Engineers on Little River Inlet, North Carolina and South Carolina requested by the Senate Committee on Public Works, approved September 23, 1965, and the House Committee on Public Works approved October 5, 1966 and again on October 19, 1967.

I am authorized by the Director of the Office of Management and Budget to advise you that there would be no objection to the submission of the proposed report to the Congress. No commitment, however, can be made at this time as to when any estimate of appropriations will be submitted for construction of the project, if authorized by the Congress, since this would be governed by the President's budgetary objectives as determined by the then prevailing fiscal situation.

Sincerely,

William A. Morrill

William A. Morrill
Assistant Director

STATE OF NORTH CAROLINA
DEPARTMENT OF NATURAL AND ECONOMIC RESOURCES
ox 27687 Raleigh 27611

CHARLES W. BRADSHAW, JR.
SECRETARY

ROBERT W. SCOTT
GOVERNOR

Office of Water and Air Resources
GEORGE E. PICKETT, DIRECTOR
TELEPHONE 829-3003

WS 72 RJBP

March 28, 1972

Lt. General F. J. Clarke
Chief of Engineers
Department of the Army
Washington, D. C. 20314

Dear General Clarke:

This is in reply to General Rollins' letter of January 20, 1972, concerning Little River Inlet, North Carolina and South Carolina. He enclosed a copy of the proposed report of the Chief of Engineers on the project, along with a draft environmental statement. The environmental statement is being acted on by the State Clearinghouse of the Department of Administration, which will respond on it.

The State of North Carolina favors the project, and concurs in your proposed report. In earlier comments on the project we asked that spoil for the sand dike at the western end of Bird Island be stockpiled and dozed into place to minimize siltation, and that the work be done during the colder winter months to avoid interference with fishermen and to minimize adverse effects on the biological productivity of the area. These construction procedures have been included in your report in the form of my letter of June 29, 1970, as Exhibit I-5.

Because the project is on a State Line, the portion of the costs to be borne by the North Carolina State and local interests is not made clear in the report. We acknowledge the general finding of the cost-sharing, calculations, but actual commitments as to cost-sharing, including any for jetty fishing facilities, will have to await the break-down between States and the formalization of commitments by contract with the Secretary of the Army.

The opportunity to comment is appreciated.

Sincerely,

George E. Pickett

George E. Pickett

STATE OF NORTH CAROLINA
DEPARTMENT OF ADMINISTRATION

ROBERT W. SCOTT
GOVERNOR

W. L. TURNER
DIRECTOR

STATE PLANNING DIVISION
RONALD F. SCOTT
STATE PLANNING OFFICER

REPLY TO:
CLEARINGHOUSE AND INFORMATION CENTER
116 WEST JONES STREET
RALEIGH, N. C. 27603
(919) 829-4375

March 9, 1972

Major General A. P. Rollins, Jr.
Acting Chief of Engineers
Department of the Army
Office of the Chief of Engineers
Washington, D. C., 20314

Dear General Rollins:

Re: DAEN-CWP-D
Draft Environmental Statement,
Little River Inlet, N. C. and S.C.,
Navigation, Dated December 30, 1971

The subject draft environmental statement, transmitted by your letter of January 20, 1972 to the Director, North Carolina Department of Water and Air Resources, has been reviewed by appropriate State agencies.

We are enclosing herewith copies of the comments we have received from the Department of Natural and Economic Resources, the State Board of Health, the State Ports Authority, and the Marine Science Council. You will note that these comments contain no objections or suggestions for revisions of the statement.

Sincerely yours,

RANDOLPH HENDRICKS
Planning Coordinator

RH:pg
Enclosure
cc: Charleston District, Corps of Engineers

STATE OF NORTH CAROLINA
DEPARTMENT OF NATURAL AND ECONOMIC RESOURCES
Box 27687 Raleigh 27611

CHARLES W. BRADSHAW, JR.
SECRETARY
TELEPHONE
AREA CODE 919-829-4177

ROBERT W. SCOTT
GOVERNOR

March 7, 1972

MEMORANDUM

TO: Randolph Hendricks

FROM: A. W. Cooper Art

SUBJECT: Little River Inlet, North Carolina and South Carolina, Navigation Improvements, Corps of Engineers

This Department has carefully reviewed the subject draft statement and we are pleased to find that all of our suggestions have been included in the statement. We concur with the statement and support the project.

x

February 11, 1972

Mr. Randolph Hendricks
Planning Coordinator
Clearinghouse and Information Center
State Planning Division
Department of Administration
Raleigh, North Carolina 27602

Re: Draft Environmental Statement,
Little River Inlet (NC and SC),
Navigation Improvements

Dear Mr. Hendricks:

This refers to your memorandum, dated February 8, 1972, requesting comments on the draft of the Environmental Statement, prepared by the Corps of Engineers, for the Navigation Improvements Project, Little River Inlet, North Carolina and South Carolina.

Our staff has reviewed the draft statement and find that those problems with which we are primarily concerned have been recognized and measures proposed for minimizing the environmental impact.

We have no suggestions to offer for revision of the draft statement and consider it acceptable in its present form.

Very truly yours,

Marshall Staton

Marshall Staton, Director
Sanitary Engineering Division

cc: Mr. Gene Barrett

North Carolina State Ports Authority

James W. Davis, Executive Director
P. O. Box 3037 919-763-1621
Wilmington, N. C. 28401

February 17, 1972

Mr. Randolph Hendricks
Clearinghouse and Information Center
116 West Jones Street
Raleigh, North Carolina 27603

Dear Mr. Hendricks:

In response to your request by letter of February 8, 1972, the Draft Environmental Statement: Little River Inlet, North Carolina and South Carolina, Navigation Improvements, Corps of Engineers, has been reviewed.

This Authority takes no exception to the statement.

Sincerely yours,

James W. Davis

JWD:jmc

STATE OF NORTH CAROLINA
DEPARTMENT OF ADMINISTRATION
POST OFFICE BOX 1351
RALEIGH 27602

ROBERT W. SCOTT
GOVERNOR
W. L. TURNER
DIRECTOR

MARINE SCIENCE COUNCIL
ADDISON HEWLETT, JR., CHAIRMAN
E. WALTON JONES, VICE CHAIRMAN

JOHN T. PITTMAN
EXECUTIVE DIRECTOR

March 1, 1972

MEMORANDUM

TO: Randolph Hendricks

FROM: John T. Pittman

SUBJECT: Draft Environmental Statement: Little River Inlet, North Carolina and South Carolina, Navigation Improvements, Corps of Engineers.

The North Carolina Marine Science Council has no comments to offer.

JTP/dj

State of South Carolina
Water Resources Commission

Clair P. Guess, Jr.
Executive Director

February 7, 1972

Major General A. P. Rollins, USA
Acting Chief of Engineers
Department of the Army
Washington, D. C. 20314

Dear General Rollins:

This is in response to your letter, DAEN-CWP-D, dated 20 January 1972 relative to the proposed improvement on Little River Inlet, North Carolina and South Carolina. Also, the draft of the environmental statement regarding the same project.

The Water Resources Commission and other agencies of the State had occasion to offer comments in connection with the proposed project to the District Engineer during the development of his report and these comments are included in the report which is to be submitted to Congress. The comments submitted at that time are still applicable. We wish to urge that as much of the dredged material as possible be used as beach nourishment and that the use of the sediment disposal area be held to an absolute minimum.

A copy of a letter from the South Carolina Wildlife Resources Department expressing their views at this time is enclosed.

We trust that this proposed project will be approved by Congress without delay and that early implementation will be a reality.

Sincerely yours,

James L. Aull
Assistant Director

JLA:fw
Enclosure

South Carolina
WILDLIFE RESOURCES DEPARTMENT
POST OFFICE BOX 167 COLUMBIA, SOUTH CAROLINA 29202

• JAMES W. WEBB
EXECUTIVE DIRECTOR

• PAT RYAN
DIRECTOR, DIVISION
OF GAME AND
FRESHWATER FISHERIES

• DR. JAMES A. TIMMERMAN, JR.
DIRECTOR, DIVISION
MARINE RESOURCES

February 3, 1972

Mr. James L. Aull
S. C. Water Resources Commission
2414 Bull Street
Columbia, South Carolina 29201

Dear Mr. Aull:

Reference the draft of the environmental statement and the report as prepared by the Department of the Army, Office of Chief of Engineers, concerning the proposed Little River Inlet Project located on the boundary between North and South Carolina.

I have reviewed these documents and find the South Carolina Wildlife Resources Department has no further comments to make.

Thanking you for this opportunity for the review and the opportunity to make a response, I remain

Sincerely yours,

ROGER A. SEAMANS
Administrative Assistant

RAS/pal

Attachment

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

June 13, 1972

Dear General Clarke:

This is in reply to a letter from your office dated January 20, 1972, requesting our views and comments on a proposed report and environmental statement on the Little River Inlet, North Carolina and South Carolina.

The Department of the Interior has no objection to the authorization of this project. The plan of development does not adversely affect any project or program of the National Park Service. It will have very little effect on the fish and wildlife resources of the study area and the mineral resources and mineral related activities will not be adversely affected. The project should not adversely affect geologic or hydrologic conditions in the study area. The recreation plan is deemed adequate and it is in accord with the recreation plans of the States of North and South Carolina.

We have reviewed the environmental statement for this project and submit the following comments for your consideration and use in preparing the final statement.

Project Description - Paragraph 2 states that approximately 1.1 million yards of sandy material will be removed during construction and the material is to be used to build sand transition dikes and to nourish the adjacent beaches. In discussing the stockpiling of this material the statement says the material will be stored on the beach, if feasible. By qualifying the location of the stockpile the statement is weakened as it now should identify some alternative locations and assess the environmental consequences of using them.

We believe the statement should also indicate the frequency of maintenance dredging of the channel. Such information is needed to assess the disruptive effect of the dredging on the aquatic environment.

Environmental Setting - This section should be expanded to discuss all aspects of the existing environment and particular emphasis should be given to discussing those aspects of the existing environment which will be altered by the project. Broad coverage in this section will give an indication of the factors that were evaluated in the environmental assessment. For example, the section should describe the fishery resources in the study area and assess the importance of the existing aquatic environment which is to be dredged. With such information one can then assess the environmental impact of the dredging operation.

The section should provide a more informative discussion of the recreation development that now exists on Grand Strand. Present and future recreation capacity and use data would help in assessing if the increased recreation use induced by this project will enhance or degrade the resource base.

This section provides no insight as to whether historical or archeological values were considered. While we do not believe the project will impact on such values their recognition in the statement indicates that they were considered in the assessment.

Environmental Impacts - This section should identify the impact of increased recreational use of the Grand Strand. The impact of dredging on the fishery resource and the aquatic environment should be set forth. In assessing the impact of dredging due consideration should be given to the frequency of maintenance dredging also. We also believe the statement should assess the impact of project structures on beach erosion in the study area.

We wish to thank you for the opportunity to review the report and environmental statement for this project.

Sincerely yours,

Deputy Assistant Secretary of the Interior

Lt. Gen. F. J. Clarke
Chief of Engineers
Attn: DAEN-CWP-D
Department of the Army
Washington, D.C. 20314

83-941 O-72——2

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS:
U.S. COAST GUARD (WS)
400 SEVENTH STREET SW.
WASHINGTON, D.C. 20590
PHONE: 202-426-2262

March 14, 1972

Lt. General F. J. Clarke
Chief of Engineers
Department of the Army
Washington, D. C. 20314

Dear General Clarke:

This is in response to Major General A. P. Rollins' letter of 20 January 1972 addressed to Secretary Volpe concerning the draft environmental impact statement and survey report for the navigation improvement project on the Little River Inlet, North Carolina and South Carolina.

The concerned operating administrations and staff of the Department of Transportation have reviewed the environmental statement and survey report and this Department has no comments to offer.

The Department of Transportation concurs with the project and finds no objection with the environmental impact statement.

The opportunity for this Department to review and comment on the Little River Inlet Project, North Carolina and South Carolina is appreciated.

Sincerely,

W. M. BENKERT
Rear Admiral, U.S. Coast Guard
Chief, Office of Marine Environment
and Systems

COMMENTS OF THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
WASHINGTON, D.C. 20201

OFFICE OF THE SECRETARY

April 18, 1972

A. P. Rollins, Jr.
Major General, USA
Acting Chief of Engineers
Washington, D. C. 20310

Dear Major General Rollins:

Secretary Richardson has asked me to respond to your letter dated January 20, 1972, wherein you requested comments on the proposed report and draft environmental impact statement for the Little River Inlet, North Carolina and South Carolina.

This Department has reviewed the health aspects of the above project as presented in the documents submitted. It has been noted that a potential exists for a mosquito breeding problem. However, if the requirements and regulations of State agencies are followed, this problem is not expected to develop.

The opportunity to review this proposed report and draft environmental impact statement is appreciated.

Sincerely yours,

Merlin K. DuVal, M.D.
Assistant Secretary for
Health and Scientific Affairs

COMMENTS OF THE ENVIRONMENTAL PROTECTION AGENCY

ENVIRONMENTAL PROTECTION AGENCY

REGION IV

1421 Peachtree St., N.E., Atlanta, Georgia 30309

April 11, 1972

General A. P. Rollins, Jr.
Acting Chief of Engineers
Department of the Army
Office of the Chief of Engineers
Washington, D. C. 20314

Dear General Rollins:

The Environmental Protection Agency's Region IV has reviewed the Draft Environmental Impact Statement on Little River Inlet (Navigation), North Carolina and South Carolina. Our comments are as follows:

The short-term effects that turbidity and silting from dredging operations would have on water quality are adequately covered. One possibility not covered, however, is the fact that fish processing houses and marinas could spring up in the area because of the accessibility of the new harbor to deep water. In this eventuality, positive steps should be taken to insure that the proposed project includes adequate safeguards to prevent pollution from fish wastes, marine toilet sources, fuel dispensing devices, garbage, bilge, and other discharges. Such safeguards are to include sewage disposal facilities designed in accordance with State and Federal standards to receive and dispose of fish wastes, wastes from boats, docks and shore-based facilities as required to prevent violation of water quality standards.

Consideration also should be given to waterway traffic solid waste disposal to prevent water pollution, health, and aesthetic problems. Plans of disposal procedure should be submitted to the affected States' solid waste management programs for approval (Solid Waste Program, Division of Environmental Sanitation, South Carolina State Board of Health, J. Marion Sims Building, 2600 Bull Street, Columbia, South Carolina and Solid Waste and Vector Control Section, Division of Sanitary Engineering, North Carolina State Board of Health, P. O. Box 2091, Raleigh, North Carolina 27602), and approval should be obtained before work on the project is started.

Also, influx of population and tourism and increased commercial-industrial activities due to and associated with construction will likely increase the load on existing solid waste collection and disposal facilities. Project personnel should discuss these increases with appropriate State and local authorities so they may be incorporated into solid waste management planning.

We would appreciate a copy of the Final Environmental Impact Statement when it is available. If we can be of help to you in any way, please call on us.

Sincerely,

Jack E. Ravan
Regional Administrator

LITTLE RIVER INLET, NORTH CAROLINA AND SOUTH CAROLINA

REPORT OF THE CHIEF OF ENGINEERS, DEPARTMENT OF THE ARMY

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314

IN REPLY REFER TO

May 30, 1972

DAEN-CWP-D

SUBJECT: Little River Inlet, North Carolina and South Carolina

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress the report of the Board of Engineers for Rivers and Harbors, accompanied by the reports of the District and Division Engineers, in response to a resolution of the Committee on Public Works of the United States Senate adopted 23 September 1965, and to resolutions by the Committee on Public Works of the United States House of Representatives adopted 5 October 1966 and 19 October 1967, requesting a review of the report on Little River, North Carolina and South Carolina, with a view to determining the advisability of modifying the recommendations contained therein at this time, with particular reference to providing an improved and stabilized channel through the Little River Inlet and offshore bar at Little River, North Carolina and South Carolina.

2. The District and Division Engineers recommend provision of a stabilized channel for recreational and commercial purposes. The recommended plan provides for a channel approximately 2.4 miles in length from the ocean across the entrance bar to the Atlantic Intracoastal Waterway, and ocean jetties on the upcoast and downcoast sides of the inlet. They estimate the total first cost at $7,373,000, of which $6,271,000 would be Federal cost for construction, exclusive of $33,000 for aids to navigation, and $1,069,000 would be non-Federal cost for construction and for lands and acquisitions. Costs for operation and maintenance of navigation facilities, exclusive of aids to navigation, are estimated to be $65,700 annually, of which $55,000 would be Federal and $10,700 would be non-Federal. Total annual benefits and costs are estimated at $748,200 and $494,900, respectively, based on a 50-year period of analysis and an interest rate of 5-3/8 percent. The benefit-cost ratio is 1.5.

3. The Board of Engineers for Rivers and Harbors concurs generally in the findings of the reporting officers and recommends the improvements substantially in accordance with the plans of the District Engineer, subject to certain conditions of local cooperation. The Board believes that the desirability of including public recreational jetty fishing facilities as part of the plan of improvement should be further considered in the pre-construction planning stage, and recommends the undertaking of such facilities when found to be justified and local interests have furnished appropriate assurances of cooperation.

4. I concur in the views and recommendations of the Board.

F. J. CLARKE
Lieutenant General, USA
Chief of Engineers

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
BOARD OF ENGINEERS FOR RIVERS AND HARBORS
WASHINGTON, D.C. 20315

IN REPLY REFER TO

DAEN-BR

December 14, 1971

SUBJECT: Little River Inlet, North Carolina and South Carolina

Chief of Engineers
Department of the Army
Washington, D. C.

1. Authority.--This report is in response to the following resolutions adopted 23 September 1965, 5 October 1966, and 19 October 1967, respectively:

> Resolved by the Committee on Public Works of the United States Senate, That the Board of Engineers for Rivers and Harbors be, and is hereby, requested to review the report of the Chief of Engineers on Little River, North Carolina and South Carolina, transmitted to Congress on January 29, 1964, with a view to determining the advisability of modifying the recommendations contained therein at this time, with particular reference to providing an improved and stabilized channel through the Little River Inlet and offshore bar at Little River, North Carolina and South Carolina.
>
> Resolved by the Committee on Public Works of the House of Representatives, United States, that the Board of Engineers for Rivers and Harbors is hereby requested to review the report of the Chief of Engineers on Little River, North Carolina and South Carolina, transmitted to Congress on January 29, 1964, with a view to determining the advisability of modifying the recommendations contained therein at this time, with particular reference to providing an improved and stabilized channel through the Little River Inlet and offshore bar at Little River, North Carolina and South Carolina.

Resolved by the Committee on Public Works of the House of Representatives, United States, that the Board of Engineers for Rivers and Harbors is hereby requested to review the reports of the Chief of Engineers on Little River, North Carolina and South Carolina, transmitted to Congress on 29 January 1964, with a view to determining the advisability of modifying the recommendations contained therein at this time, with particular reference to providing an improved and stabilized channel through the Little River Inlet and offshore bar at Little River, North Carolina and South Carolina.

2. Description.--Little River rises in Little River Swamp in the extreme northeastern part of South Carolina, flows generally east parallel to the coast, and enters the Atlantic Ocean at Little River Inlet near the North Carolina - South Carolina State line. The inlet affords the only connection between the Atlantic Intracoastal Waterway and the ocean along the approximate 68-mile reach from Shallotte, North Carolina, to Georgetown, South Carolina. The inlet throat is obstructed by extensive sand shoals, and the bar channel is unstable and continually shifting. The controlling depth in the inlet is about 3 feet at mean low water.

3. Tributary area and commerce.--Little River Inlet is part of the "Grand Strand," a rapidly growing national resort and South Carolina's most popular vacation spot. The "Strand" consists of 50 miles of resort beaches along South Carolina's northeast coast. The economy of the area is based primarily on servicing the tourist and recreational trade. There are seven marinas, numerous private docks, and several public boat ramps located in or near Little River. Facilities are expected to expand and new ones to be added as demands for their services exceed capacity. Commercial fish catches are generally off-loaded from private docks to refrigerated trucks and transported to processing and distribution centers at Myrtle Beach, South Carolina.

4. Existing improvements.--There is no existing Federal project at Little River Inlet. However, emergency dredging of the inlet was performed by the Corps of Engineers in August 1967 and in November 1968. The Atlantic Intracoastal Waterway intersects Little River from the north 2.4 miles above the ocean inlet and continues its southward course along the natural channel. A beach erosion and hurricane protection project is authorized for the beaches between Little River Inlet and the Cape Fear River in North Carolina.

5. Difficulties attending navigation.--Principal difficulties result from inadequate depths across the ocean and inner bars and from continual shifting of the bar channel. The channel alignment shifts so rapidly and so often that it is difficult for the Coast Guard to maintain channel markers in proper positions. During periods of low tide or rough weather, the bars are extremely hazardous if not impassable.

6. Improvement desired.--Local interests desire a deeper, stable channel through the inlet bar to the ocean to provide free and unhindered navigation for the recreational and commercial fishing fleets.

7. Improvement proposed.--The District Engineer concludes that the most practicable plan of improvement would provide an entrance channel 12 feet deep by 300 feet wide across the ocean bar, thence, 10 feet deep by 90 feet wide to the Atlantic Intracoastal Waterway; and ocean jetties 3,200 feet and 3,000 feet long on the upcoast and downcoast sides of the inlet, respectively. Sand dikes would also be constructed to tie the jetties to the shore.

8. Costs and justification.--The District Engineer estimates the first cost of the proposed plan of improvement, based on July 1970 price levels, at $7,373,000, of which $6,304,000 is the Federal share and $1,069,000 is the non-Federal share. Non-Federal costs include $557,000 for the navigation features and $512,000 for lands. The annual charges are estimated at $494,900 including $56,700 for Federal operation and maintenance of the navigation element, and $10,700 for the non-Federal share allocable to the recreational aspect of the improvement. Prospective annual benefits are estimated at $748,200 primarily for recreational boating, commercial charter boat operations, and commercial fishing. The benefit-cost ratio is 1.5 based on a 50-year period of analysis and an interest rate of 5-3/8 percent. The District Engineer recommends authorization of his plan, subject to certain conditions of local cooperation. The Division Engineer concurs.

9. Public notice.--The Division Engineer issued a public notice stating the recommendations of the reporting officers and affording interested parties an opportunity to present additional information to the Board. No communications have been received.

Views and Recommendations of the Board of Engineers for Rivers and Harbors.

10. Views.--The Board of Engineers for Rivers and Harbors concurs in general in the views and recommendations of the reporting officers. The proposed navigation improvements are economically justified, and the requirements of local cooperation are appropriate. The Board carefully considered the environmental effects of the proposed improvements, including those discussed in the preliminary draft environmental statement dated 24 August 1971. It believes that any adverse effects will be minimized by positive measures undertaken during construction and subsequent maintenance of the project. The Board has also considered the effects of the proposed project on the objectives of social well-being, national economic efficiency, and regional economic benefit as required by Section 122 of Public Law 91-611, enacted by the Congress of the United States on 31 December 1970. It notes that the plan recommended by the reporting officers is well justified on the basis of national economic benefits and considers that it will also contribute significantly to regional economic and social well-being. The Board notes that local interests have strongly endorsed the recommended plan and that there is no opposition from State and Federal agencies. The Board further notes that the reporting officers gave consideration to the capping of at least one jetty to provide a safe, functional walkway for public fishing activities, and determined that such a walkway lacks economic justification by a small margin at this time. The Board notes the general widespread popularity of jetty fishing and that past trends in salt water fishing in the South Atlantic region have grown at a faster rate than the projected growth assumed in the reporting officers' analysis. The Board, therefore, believes that the desirability of including public recreational jetty fishing facilities as part of the plan of improvement should be further considered in the preconstruction planning stage, and if found to be justified, such facilities should be undertaken subject to the provision of appropriate assurances of local cooperation.

11. Recommendations.--Accordingly, the Board recommends improvements at Little River Inlet, North Carolina and South Carolina, consisting of:

An entrance channel, 300 feet wide and 12 feet deep, across the seaward bar;

An interconnecting channel, 90 feet wide and 10 feet deep, to the Atlantic Intracoastal Waterway;

Jetties extending oceanward, 3,200 feet and 3,000 feet on the upcoast and downcoast sides of the inlet, respectively; and

Sand transition dikes connecting the jetties to shore;

All generally in accordance with plans of the District Engineer and with such modifications thereof as in the discretion of the Chief of Engineers may be advisable, at an estimated construction cost of $6,828,000 for navigation features, exclusive of $33,000 for aids to navigation; subject to the condition that no dredging shall be done by the United States within 25 feet of any established pierhead line, wharf, or other structure: Provided that, prior to construction, local interests agree to:

a. Provide without cost to the United States all necessary lands, easements, and rights-of-way required for construction and subsequent maintenance of the project and for aids to navigation upon the request of the Chief of Engineers, including suitable areas determined by the Chief of Engineers to be required in the general public interest for initial and subsequent disposal of dredged material, and also necessary retaining dikes, bulkheads, and embankments therefor, or the cost of such retaining works;

b. Hold and save the United States free from damages that may result from construction and maintenance of the project;

c. Accomplish without cost to the United States alterations and relocations as required in sewer, water supply, drainage, and other utility facilities;

d. Provide, maintain, and operate without cost to the United States an adequate public landing or wharf with provisions for the sale of motor fuel, lubricants, and potable water open and available to all on equal terms;

e. Provide and maintain without cost to the United States depths in berthing areas and local access channels commensurate with project depths;

f. Establish regulations prohibiting discharge of pollutants into the waters of the channels by users thereof, which regulations shall be in accordance with applicable laws or regulations of Federal, State, and local authorities responsible for pollution prevention and control;

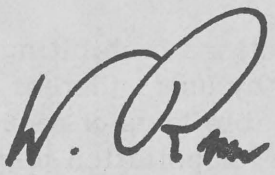
g. Contribute in cash 8.2 percent of the construction cost of navigation features, including engineering and design, and supervision and administration of all work to be provided by the Corps of Engineers, a contribution now estimated at $557,000, to be paid in a lump sum prior to start of construction or in installments prior to start of pertinent work items in accordance with construction schedules as required by the Chief of Engineers, the final apportionment of cost to be made after actual costs have been determined; and

h. Contribute in cash 16.3 percent of the annual maintenance costs for general navigation facilities, a contribution now estimated to average $10,700 annually, to be paid by placing in an escrow account an amount sufficient to cover such costs for a period of 5 years, with the amount of local cost sharing for this item to be readjusted every 5 years after the date of the signing of the formal agreement, in a manner considered appropriate by the Chief of Engineers, to reflect recreational benefits attributable to the project at that time, and to reflect reanalysis of expected maintenance costs.

12. The net cost to the United States for the recommended improvement is $6,271,000 for initial construction and $55,000 annually for maintenance exclusive of navigation aids.

13. The Board further recommends the undertaking of such modifications in the recommended plan as in the discretion of the Chief of Engineers may be advisable in the interest of providing public recreational fishing facilities on the proposed jetties when found to be justified: Provided that, prior to construction of the recreational facilities, local interests agree to: Contribute at least 50 percent of the costs associated with the jetty fishing, including lands, engineering, design, and supervision and administration; operate and maintain for the life of the project the public use recreational facilities including access roadway and parking areas; and provide access to the jetty fishing facilities to all on equal terms; and provided further that the improvement for navigation may be undertaken independently of providing public recreational fishing facilities whenever funds are available and the required local cooperation for the navigation project has been furnished.

FOR THE BOARD:



W. ROPER
Major General, USA
Chairman

REPORT OF THE DISTRICT ENGINEER

SYLLABUS

Local interests have requested that a stable channel be provided at Little River Inlet, South Carolina, from the inner channels through the inlet throat and across the ocean bar to permit unrestricted passage to the ocean.

The District Engineer finds that the need exist for improvement of channels to enable free and unhindered navigation for recreational and commercial purposes. The District Engineer further concludes that the best solution to this problem is construction of a two-jetty system, combined with periodic dredging to maintain the proposed channel dimensions, and that the evaluated average annual benefits of the navigation improvement proposed herein would exceed the average annual charges in the ratio of 1.5:1.

The recommended plan of improvement would provide an entrance channel 12 by 300 feet across the seaward bar; thence a 10-by 90-foot inner channel to the Atlantic Intracoastal Waterway. The entrance channel would be stabilized by ocean jetties extending seaward, 3,200 feet and 3,000 feet on the upcoast and downcoast sides of the inlet, respectively.

It is recommended that the above-described plan be implemented at an estimated total first cost of $7,373,000 and an estimated total annual maintenance cost of $67,400, provided that local interests meet the requirements of local cooperation. These requirements include provision of lands and acquisition for the general navigation facilities at an estimated cost of $512,000, a local cash contribution in the amount of 8.2 percent of the general navigation facilities construction cost, which share is presently estimated at $557,000; provide a local contribution of 16.3 percent of the average annual maintenance costs for general navigation facilities, a share presently estimated to be $10,700, which is to be readjusted each five years. The remaining costs to be borne by the Federal Government are now estimated to amount to $6,304,000 of the first cost, and $56,700 in annual maintenance costs.

DEPARTMENT OF THE ARMY
CHARLESTON DISTRICT, CORPS OF ENGINEERS
P.O. BOX 919
CHARLESTON, S.C. 29402

SANGC

May 27, 1971

SUBJECT: Review of Reports on Little River Inlet, North Carolina and South Carolina

Division Engineer, South Atlantic
Atlanta, Georgia

INTRODUCTION

1. Authority. This report is submitted in full compliance with the following resolutions:

> "Resolved by the Committee on Public Works of the United States Senate, that the Board of Engineers for Rivers and Harbors, be, and is hereby, requested to review the report of the Chief of Engineers on Little River, North Carolina and South Carolina, transmitted to Congress on January 29, 1964, with a view to determining the advisability of modifying the recommendations contained therein at this time, with particular reference to providing an improved and stabilized channel through the Little River Inlet and off-shore bar at Little River, North Carolina and South Carolina." Adopted 23 September 1965.

> "Resolved by the Committee on Public Works of the House of Representatives, United States, that the Board of Engineers for Rivers and Harbors is hereby requested to review the report of the Chief of Engineers on Little River, North

Carolina and South Carolina, transmitted to Congress on January 29, 1964, with a view to determining the advisability of modifying the recommendations contained therein at this time, with particular reference to providing an improved and stabilized channel through the Little River Inlet and offshore bar at Little River, North Carolina and South Carolina." Adopted 5 October 1966 and 19 October 1967.

2. Purpose and extent of study. Investigations were conducted to determine the needs, environmental impact, economic justification, and advisability of providing an improved channel for present and prospective users. The scope of this study is limited to boating activities at Little River Inlet, N. C. and S. C., and their relationship to the economy and the environment. Investigations include a hydrographic survey of inner channels, the throat of the inlet and offshore area, and measurements of discharge through the inlet. Past and present boating activities have been inventoried and evaluations of the benefits and costs of various solutions to the navigation problems have been made.

3. Prior reports. A Review Report on Little River, N. C. and S. C., dated 29 May 1963 was transmitted to Congress on 29 January 1964. This report concluded that the benefits to be expected from providing the improvement would be insufficient to justify the probable cost of construction and annual maintenance. It recommended that no further studies be made at that time. Other reports, all unfavorable, were published in House Document 530, 60th Congress; H. D. 249, 65th Congress; H. D. 1190, 65th Congress; and an unpublished report dated 15 April 1946 recommending a survey.

DESCRIPTION

4. Location. Little River rises in Little River Swamp in the extreme northeastern part of South Carolina, flows generally east, parallel to the coast, and enters the Atlantic Ocean at Little River Inlet, near the North Carolina-South Carolina state line. The locality is shown on Army Map Service Sheet NI-17-9 (Georgetown), series V501, at a scale of 1:250,000; on Army Map Service Sheet SE 5251I (Little River), series V846, at a scale of 1:25,000; and on the U. S. Geological Survey Quadrangle, "Little River", at a scale of 1:24,000. It is also shown on U. S. Coast and Geodetic Survey (now National Ocean Survey) Sheet 1237 (scale of 1:80,000), and Nautical Chart 835-SC (Small Craft), at a scale of 1:40,000.

5. Channels. The channel leading to the migrating inlet is obstructed by a shifting offshore sandbar. In August 1967, emergency dredging was performed providing an eight-foot cut through the

83-941 O-72——3

inner bar, 100 feet wide, for a distance of 1,200 feet. Prior to this the inlet throat was obstructed by extensive sand shoals attending migration of the inlet, constituting an unstable channel without adequate depths to permit unrestricted navigation. Normal controlling depth was about three feet with numerous occurrences, under extreme conditions, of depths less than 2.5 feet. During November 1968, emergency dredging was performed at the entrance bar in an attempt to provide a channel 100 feet wide and 10 feet deep for a distance of 2,600 feet. Wave action prevented the achievement of design dimensions and the work accomplished deteriorated rapidly.

6. Tides. The Atlantic Intracoastal Waterway enters Little River about 2.4 miles above the mouth of the River (that is, above the mouth of Little River Inlet). At a point one mile above the mouth of the river the mean range is 5.0 feet and the spring range is 5.9 feet. At the town of Little River the mean range is 5.2 feet, and the spring range is 6.1 feet. Hurricane Hazel, of 15 October 1954, produced some of its highest observed storm tides in this area. At Cherry Grove Beach, roughly on the ocean fronting the town of Little River, a maximum highwater mark of nearly 17.0 feet above mean sea level was observed; at the town of Little River a tide level of about 16.5 feet above mean sea level is estimated to have occurred.

7. Tributary area. Little River Inlet is part of the "Grand Strand," a rapidly growing national resort and South Carolina's most popular vacation spot. The "Strand" consists of 50 miles of resort beaches along South Carolina's northeast shore. The population of the area in 1967 was estimated to be about 27,000 permanent residents, with about 175,000 tourists visiting the area on busy weekends. About 75 percent of this tourist trade is attracted from the Carolinas and Virginia, but almost all eastern states are represented at the "Grand Strand." The origin of this tourist trade is shown by Figure F-1 of Appendix F.

8. Bridges. There are no bridge crossings of navigable channels between Little River Inlet and the AIWW. The presence of vast tidal marsh areas adjacent to inner channels makes it highly improbable that bridges will be constructed across navigation channels in the foreseeable future.

9. Terminal facilities. There are seven marinas, numerous private docks, and several public boat ramps located in or near Little River. These are adequate to handle existing and near future traffic. Besides docking facilities, marinas offer many boating necessities such as fuel, oil, groceries, water and repair services on a non-discriminatory basis. It is expected that existing facilities will expand and new facilities will be added as demands for services exceed current capacity.

10. Transfer facilities. Commercial catches are generally off loaded from private docks to refrigerated trucks. Catches are then transported to processing and distribution centers located at Myrtle Beach, S. C. Processing interests have expressed a desire to construct facilities in the Little River and Calabash communities. Rail outlets for increased production anticipated, when unrestricted passage from berthing areas to the sea is a realization, are available at Myrtle Beach, S. C.

11. Geomorphology. The North and South Carolina Coastal Plain in the vicinity of Little River Inlet consists of sands, clays, marls, and limestones. The materials forming the beach face consist chiefly of silica sands with an abundance of shell fragments. The underlying formation in the vicinity of Little River Inlet is the Pee Dee of Cretaceous period. During the Pleistocene epoch there were repeated changes in sea level due chiefly to the enlargement and shrinkage of the ice caps and glaciers. The sea invasion now going on is due partly to a slow rise in sea level, but mostly to erosion by storm waves, longshore currents and tidal currents.

12. Littoral drift. The transport of littoral drift up and down the coast in the vicinity of Little River Inlet is more or less balanced. Gross annual upcoast and downcoast drift rates are each estimated to be about 150,000 cubic yards. A detailed discussion is presented in Appendix B.

13. Corps of Engineers projects. Authorized and prospective Corps projects related to Little River Inlet are:

a. The Atlantic Intracoastal Waterway intersects Little River from the north 2.4 miles above its mouth and continues its southward course along the natural river channel to the headwaters where it enters a cut which extends the length of the Grand Strand to Waccamaw River. Project depth is 12 feet and width is 90 feet, with widening at critical bends and crossings. Present dimensions were completed in 1940.

b. A beach erosion and hurricane protection project is authorized for the beaches lying between Cape Fear River and the North Carolina - South Carolina State line. The project when constructed will provide beach fill and an artificial dune for Oak Island, and Holden, Ocean Isle, and Sunset Beaches. The dune will be constructed to 20 feet m.s.l. and the beach berm to 15 feet m.s.l.

c. There is an existing navigation project at Shallotte River, 12.4 miles ENE of Little River Inlet, measuring from AIWW crossings. The authorized project consists of a channel 4 feet deep by 36 feet wide through Shallotte Inlet to the town of Shallotte, a distance of 9 miles. Recent condition reports show a controlling depth of 4 feet in this channel.

d. A navigation project at Murrells Inlet was recommended to the Chief of Engineers by the Board of Engineers for Rivers and Harbors on 18 June 1970. The plan includes an entrance channel 12 feet deep and 300 feet wide, an inner channel 10 feet deep and 90 feet wide to berthing areas, and double jetties with the upcoast jetty having a weir section to facilitate sand bypassing.

EXISTING AND PROSPECTIVE COMMERCE

14. General. Since Little River is interconnected with the Atlantic Intracoastal Waterway, it makes an ideal inlet for use by the many private boat owners visiting or living at Myrtle Beach and North Myrtle Beach in South Carolina and Sunset and Ocean Isle Beaches in North Carolina. For all practical purposes, Little River Inlet affords the only outlet from the Intracoastal Waterway to the ocean between Shallotte, N. C., and Georgetown, S.C. While Mad and Tubbs Inlet, to the east of Little River Inlet, might be improved for navigation, the length of channel to be improved would be greater and maintenance would be more expensive, while benefits would be less than those accruing to the improvement of Little River Inlet, because of the greater travel distance of users. There are numerous marinas and docks, located along the waterway, serving as mooring and launching areas for a variety of watercraft.

15. Existing boats. Currently, there are approximately 670 boats of various classes permanently harbored at Little River. Boats hauled into the area for day use are equivalent to 530 additional permanent vessels. Most of this fleet is maintained for recreational use. Some of the larger boats have dual use as charter or headboats during the tourist season and as commercial fishing boats during the off-season, and a portion of the fleet is exclusively used for commercial fishing. A tabulation of boats harbored at Little River is given in Table 1 below:

TABLE 1

BOATS HARBORED AT LITTLE RIVER

Class	Number of Boats	
	Permanent	Day Use
Outboards	310	500
Sailboats	3	
Auxiliary Sailboats	1	
Inboards	230	30
Cruisers	100	
Charter and Head Boats (Commercial)	18	
Commercial Fishing Boats1/	8	
Total	670	530

1/ About 20 out-of-state commercial fishing boats which make seasonal use of the inlet are not included in the tabulation.

16. Relocated boats. Since the hereinbefore described emergency works had no lasting value, many boat operators now find it necessary to relocate in order to survive. Table 2 below lists some of the boats that have relocated within the past few years. In addition to these, many other smaller boats have also relocated.

TABLE 2

VESSELS FORMERLY OPERATING FROM LITTLE RIVER INLET
THAT HAVE RELOCATED BECAUSE OF NAVIGATION PROBLEMS

Name	Type
Lucky Lady	Charter
Carolina Queen	Head
Ava	Head
Rainbow	Shrimp & Finfish
Coastal II	Shrimp & Finfish
Mayflower	Shrimp
Bobbie H	Shrimp

IMPROVEMENT DESIRED

17. Difficulties attending navigation. Principal difficulties result from inadequate depths across the ocean and inner bars and continual shifting of the bar channel. Channel alignment shifts so rapidly and so often that it is difficult for the Coast Guard to maintain channel markers in proper positions. During periods of low tide or high seas or swell, the bars are extremely hazardous if not impassable.

18. Improvement desired. A public meeting was held at Ocean Drive (now North Myrtle Beach), South Carolina, on 27 June 1968. About 100 persons attended, including representatives of Federal and State agencies, and local interests from nearby counties and towns. At this hearing, local interests expressed their desire for a deeper, stable channel through the inlet bar to the ocean. Following the tentative selection of the plan of improvement recommended herein, a late-stage public meeting was held at the same place on 6 May 1971. Attendance at this meeting was about 95 persons. There was no apparent opposition to the improvement described. A digest of these public meetings is included as Appendix A.

PROJECT FORMULATION

19. General. The recommended plan of improvement represents, within sound engineering and economic principles and applicable

Federal law and policy, the most feasible project to meet existing and projected needs, maximizes net benefits and affords maximum utilization of natural resources.

20. Alternate plans investigated. Several possible solutions to the problem of providing a stabilized channel of sufficient depth and width for regular use by commercial and recreational fishing vessels are worthy of consideration. Since experience has shown that it is not economically or physically feasible to maintain the channel by dredging alone, a proper solution must also include structural controls. Structural controls considered include jetties, and conventional and special facilities for sand bypassing. An optimum project was selected by maximizing benefits through comparison of cost and benefits for incremental project requirements related to variations in project depths. Alternative plans considered are discussed in detail in Appendix D. Recreational features are discussed in Appendix E.

21. Optimum plan of improvement. The plan that best satisfies the requirements for navigation consists of: an entrance channel, 300 feet wide and 12 feet deep extending from that depth in the Atlantic Ocean through the outer bar, a distance of approximately 3,200 feet; an inner channel, 90 feet wide and 10 feet deep from the entrance channel to the Atlantic Intracoastal Waterway, a distance of 9,050 feet; a jetty on the north side of the inlet approximately 3,200 feet long; a jetty on the south side of the inlet approximately 3,000 feet long; and sand transition dikes connecting the structures to the shore. Details of this plan are shown on Plates 1, 2, and 3, and described in Design Appendix E. In order to provide a more dependable channel between dredgings, an overdepth of 2 feet is prescribed in addition to the usual dredging tolerance.

22. Environmental considerations. The major effect sought by the project is the more economical maintenance of required navigational depths through Little River Inlet; that is, to reduce dredging requirements that are often considered environmentally objectionable. Secondary effects will be the stabilization of the inlet (or gorge) location, and some change in the hydrology of the inlet. The dikes abutting the jetties will be formed from sand dredged from the entrance and inner channels, with additional requirements coming from the designated borrow area. Since this appears to be sand with low silt content, turbidity effects are expected to be minimal and these can be further reduced by scheduling dredging for the winter months. The volume of sand to be removed periodically by maintenance dredging is estimated to average about 10,000 cubic yards a year, all from the inner channel. It is planned to use this material to nourish adjacent beaches.

23. It is planned to plant the dike with appropriate grasses and shrubbery to help stabilize it as well as to beautify it. It is not expected that the land requirements will conflict with any planned future land uses of the project area. About 40 acres of shoal area will be dredged to 10 and 12 foot depths, which should give a more productive habitat in the vicinity of the jetties, and greater accessibility to offshore fisheries. This should result in a net increase in the nation's food supply and income gains to local beneficiaries.

DESIGN CONSIDERATIONS

24. Materials investigation. Jet problings and materials samples taken in the ocean at Little River Inlet revealed the presence of sands suitable for jetty and dike construction. Materials found all along the proposed channel alignment are of a type that can be dredged easily with the possible exception of compacted sands in the surf zone of the inlet gorge, and are generally suitable for beach nourishment. A detailed evaluation of materials is given in Appendix C.

25. Channel currents. The strength of the existing tidal currents would be affected by the spacing of the jetties. Post-project peak currents would be increased from 2 knots to about 3.4 knots to effect some self-cleaning of the channels. These velocities should present no hazard to vessels using the inlet.

26. Channels. Design of the channels takes into consideration vessel dimensions and maneuverability characteristics under the various navigational conditions prevailing in the area. Such conditions include traffic density, tides, current velocities, and channel bends. Consideration was also given to littoral currents and strength and direction of predominant waves.

27. Dredging. Dredging requirements for both construction and maintenance were taken into account when designing the project. The design will permit the use of a hydraulic cutterhead dredge. All dredged materials are expected to be utilized in the construction of the sand dikes.

28. Jetties. The jetty design described in Appendix E takes into consideration siting and alignment requirements necessary to provide shelter and to stabilize the entrance channel. Materials were selected with a view to longevity, maintenance, and availability. Detailed consideration was given to selection of the significant wave height, and other forces acting upon the structures.

29. Vegetation. Planting of ground cover would be provided for both sand dikes to prevent erosion, to trap wind-blown sand, and to make the dikes aesthetically appealing. This vegetation would consist of types typically found on sand dunes in the Carolina Coastal Region (see Appendix E).

ESTIMATE OF COST

30. Estimate of first cost. Estimated first costs are based on July 1970 price levels. Dredging quantities used in computations include an overdepth of 2 feet in addition to the recommended project depth throughout the channel. Estimates of cost for aids to navigation were furnished by the U. S. Coast Guard and are included in Appendix I as Exhibit I-1. For details on costs see Appendix H. Estimates are summarized in Table 3.

TABLE 3

SUMMARY OF FIRST COSTS

Item	Cost
GENERAL NAVIGATION FACILITIES	
Jetties	$4,011,000
Excavation	874,000
Sand dikes	362,000
Contingencies	787,000
Engineering and design	462,000
Supervision and administration	332,000
Lands and acquisition	512,000
Total	$7,340,000
AIDS TO NAVIGATION	$ 33,000
TOTAL PROJECT FIRST COST[1/]	$7,373,000

1/ Does not include preauthorization study costs of $50,000.

31. Estimate of annual charges. Estimated annual charges for the recommended improvement are shown in Table 4. An interest rate of five and three-eighths percent and an amortization period of 50 years were used in computing these costs.

TABLE 4

SUMMARY OF ANNUAL CHARGES

Item	Interest	Amortization	Maintenance	Total
General Navigation Facilities	$367,000	$28,900	$65,700	$461,600
Lands and Acquisition	27,500	2,200	0	29,700
Aids to Navigation	1,800	100	1,700	3,600
TOTAL AVERAGE ANNUAL COST	$396,300	$31,200	$67,400	$494,900

ESTIMATES OF BENEFITS

32. General. The benefits attributed to the project are classified as recreational or commercial. Recreational benefits accrue to owners of craft operated for personal pleasure. Commercial benefits accrue to operators of commercial fishing boats, and to operators of charter and head boats. Another benefit consists of the reduction in vessel operating costs stemming from time saved in reaching and returning from fishing grounds. The elimination of vessel damages is a benefit accruing to both commercial and recreational vessels. Harbor of refuge benefits accrue only to craft classified as commercial, and are evaluated in terms of the decreased vessel operating costs made possible by the refuge utilizable with the project instead of the more distant alternative refuge that would be used without the project. For detailed benefit estimates see Appendix G.

33. Projections of the recreation and commercial fleet. There are 18 charter and head boats and over 1,000 smaller boats operating from Little River Inlet. Three other charter and head boats and approximately 35 other smaller vessels have relocated because of difficulties experienced in navigating the inlet bar. Shoaling in the access and ocean bar channels caused the charter and head boat business to decline by at least 1/3 in calendar year 1968. This decline is attributed primarily to time lost awaiting a favorable tide. Patrons are left with a feeling that they have been deprived of a full day of fishing. If no project is forthcoming, all the charter and head boats currently using the inlet will likely be forced to relocate for economic reasons. Construction of a project, on the other hand, would encourage the return of these boats. The fleet is expected to grow at a rate reflecting the demand for this type of activity, which is currently estimated to be 4.5 percent per year. The number of privately operated recreational boats is presently increasing at about 4.2 percent annually. The commercial fishing fleet

is expected to increase with the growth of their market. This view is well founded by the number of expressions of interest in locating fishing and shrimping operations and associated support industries in the Little River area. In determining growth rates, consideration was given to projections of related parameters such as population, income, retail sales, employment, and commercial recreation (see Appendix F for economic projections). Projections of the number of boats by class for the 50-year life of the project are shown in Table 5.

TABLE 5

FLEET PROJECTIONS

Class of Boat	Number of Boats			
	Present		End of 50-Year Project Life	
	Actual	Probable Without Nav. Problem	Without Project	With Project
Personal Pleasure Craft	1174	1209	2312	2791
Charter and Head Boats (Commercial)	18	21	0	143
Commercial Fishing Boats	8	12	0	69
TOTALS	1200	1242	2312	3003

34. Recreational and commercial charter boating. Benefits attributable to recreational and commercial charter boating are shown graphically in Figure G-1 as the hatched area between curves depicting projected benefits with and without the project. The $27,690,000 of benefits attributable to the project have a present worth of $6,555,000 when discounted at 5-3/8 percent. Average annual equivalent benefits are $380,100, of which $266,800 are attributable to commercial charter boating. Computations are based on factors shown in Table 6.

TABLE 6

FACTORS PERTINENT TO THE COMPUTATIONS OF RECREATIONAL AND COMMERCIAL CHARTER BOATING BENEFITS

Class	Average Depreciated Value	Average Net Annual Return as % of Depreciated Value	Percent of Potential Realized Existing	Percent of Potential Realized w/Project
Outboards	$ 800	15	90	100
Sailboats	1,000	10	90	100
Auxiliary Sail-boats	3,000	9	70	100
Inboards	2,000	10	80	100
Cruisers	10,000	9	70	100
Charter & Head Boats (Commercial)	30,000	20	60	100

35. Commercial fishing. Benefits attributable to commercial fishing, as distinct from commercial charter boat operations, are shown graphically in Figure G-4. The $22,130,000 of benefits attributable to the project have a present worth of $5,746,000 when discounted at 5-3/8 percent. Average annual equivalent benefits are $333,100. Computations are based on factors shown in Table 7.

TABLE 7

FACTORS PERTINENT TO THE COMPUTATION OF COMMERCIAL FISHING BENEFITS

Fish Class	Present Annual Catch in Lbs. Actual	Present Annual Catch in Lbs. Probable Without Nav. Problem	Avg. Price per pound at dock	Net Profit fm catch
Fin-fish	366,400	741,300	$0.28	49%
Shrimp (heads off)	130,500	309,900	0.97	43%

36. After the initial surge following improvement of the inlet, the landing of fin-fish is expected to parallel approximately the growth of local and distant markets. Growth of the local market is expected to decline from the present 4.5 percent annually after about

20 years, while the distant market demands were estimated at the projected national population growth rates. Increase in the shrimp catch, subsequent to an initial surge, should level off as a direct result of the harvest being near maximum levels. Projected annual catches are shown in Table 8. See Appendix G for details.

TABLE 8

PROJECTED ANNUAL CATCHES AT LITTLE RIVER INLET
(with the project)

	Catches in 1000 pounds by decade					
Fish Class	1970	1980	1990	2000	2010	2020
Fin-fish	741	1,080	1,590	2,270	3,120	4,130
Shrimp (heads off)	310	357	410	410	410	410

37. Land enhancement and shore protection. Stabilization of Little River Inlet may be beneficial in the control of beach erosion, since littoral drift will be impounded in fillets on exterior sides of the jetties. Such accretion will provide a wider beach at the southern end of Bird Island and the northern end of Waiter Island. For several reasons, however, this has not been counted as a benefit. First, such effects are not deliberately sought, nor are dredging operations to be tailored to make such results certain. Also, no recreational use is presently made of the beach on Bird or Waiter Island, nor is any expected, partly due to the danger of swimming near the jetties. Thus no economic benefits are expected to be realized for land enhancement and shore protection. A discussion of the probable effects of the jetty on adjacent shores is given in Appendix B.

38. Reduction in vessel operation cost. Vessels are sometimes required to detour to other ocean entrances when Little River Inlet is impassable. They usually use Shallotte Inlet, N. C., which is about 16 miles away. This channel is also unstabilized with a controlling depth of about 4 feet and is marked only by bottle floats. The average operating time saved per trip by eliminating the detour would be about 1.5 hours. About 130 detour trips are made each year, therefore annual benefits stemming from their elimination will be about $2,000.

39. Reduction of hazards to vessels. During calendar year 1968, considered to be a typical year, boat operators reported $28,000 in physical damage to vessels. Damage was in the form of bent shafts, propellers, and rudders, paint scraped from hulls, and parts knocked

or ripped off when striking bars or when being towed clear after grounding. It is assumed that all the vessel damage relating to shoaling conditions will be eliminated after improvement of the inlet.

40. Adverse effects on overland transportation. There are no bridge crossings of the inlet nor are any foreseen for the period of project life.

41. Harbor of refuge. An average of 7 deep draft boats, not normally based at Little River Inlet, as well as 26 local boats are expected to use the harbor as a refuge during approximately 10 storms per season. It is estimated that each vessel saves one and one-half hours running time by using this harbor rather than others. Average annual benefits for provision of an all tide harbor of refuge is about $5,000.

42. Redevelopment benefits. An additional benefit, not considered in project justification, is that attributable to wages likely to be received by locally unemployed persons in the construction and maintenance of the project, unless a sufficient number of unemployed persons live in counties qualified under Title IV of the Public Works and Economic Development Act of 1965 that are within commuting distance of the project. This deviation is shown in Table G-11, Appendix G. Average annual redevelopment benefits are estimated at $19,200.

43. Summary of estimated annual benefits. Benefits attributable to the proposed plan of improvement are summarized in Table 9.

TABLE 9

SUMMARY OF BENEFITS

Source of Benefit	Average Annual Benefit
Recreational boating	$113,300
Commercial charter boating	266,800
Commercial fishing	333,100
Land enhancement and shore protection	Nil
Reduction of vessel operating cost	2,000
Reduction of hazards to vessels	28,000
Adverse effects on overland transportation	Nil
Harbor of refuge	5,000
TOTAL[1/]	$748,200

1/ Does not include redevelopment benefits ($19,200).

COMPARISON OF BENEFITS AND COSTS

44. Comparison of benefits and costs. The evaluated average annual benefits of the proposed project ($748,200) exceed the average annual charges ($494,900) in the ratio of 1.5:1.

COORDINATION AND LOCAL COOPERATION

45. Coordination with other agencies. A public hearing was held at the outset of this survey to determine the opinions, interests, and desires of the local populace and of representatives of other agencies interested in the project. Close coordination was effected with the Federal and State agencies listed below, each of which was asked to submit a written opinion concerning the recommended project.

U. S. Coast Guard, Department of Transportation
U. S. Department of the Interior, Federal Water Pollution Control Administration
U. S. Department of Interior, Bureau of Outdoor Recreation
U. S. Department of Interior, Fish and Wildlife Service
N. C. Department of Conservation and Development, Division of Commercial and Sport Fisheries
N. C. Department of Water and Air Resources
S. C. State Board of Health, Pollution Control Authority
S. C. Water Resources Commission

46. Comments from other agencies. Comments from all agencies were favorable to the project, but the following recommendations were made:

a. The North Carolina Department of Conservation and Development, Division of Commercial and Sports Fisheries and the N. C. Department of Water and Air Resources requested that disposal material for sand dike construction at the western end of Bird Island be stockpiled and dozed into place to minimize siltation, and that the work be done during the colder winter months to avoid intereference with fishermen and minimize adverse effects on the biological productivity of the area. The department also requested that consideration be given to the effects of this project on the authorized beach erosion and hurricane protection project called "Cape Fear to North Carolina-South Carolina State Line."

b. The South Carolina Wildlife Resources Department recommends that any disposal material which cannot be used as beach nourishment be placed in an area above the mean high water mark.

c. The Bureau of Outdoor Recreation stated that it had "no comment" concerning the recreational aspects of the project. Comments by this and other agencies appear in Appendix I.

47. Response to comments. The method of first stockpiling sand for the construction of the dike upland of the inlet, and later pushing it into place by bulldozer, as recommended by the N. C. Department of Conservation and Development and the N. C. Department of Water and Air Resources, is one means of minimizing siltation. However, since this occasions added rehandling costs, it might be preferable to construct low dikes extending from the shore at Bird Island into the inlet to detain the dredged material pumped into such an inclosure for such a period as to allow the fines to settle out. The low dikes would be constructed of nearby beach sand, and would be constructed at low tide. While it might be impracticable to perform all dike construction during the winter months, an effort would be made to schedule this work for the colder season to avoid interference with fishermen and minimize adverse effects on the biological productivity of the area. It has been concluded that the jetty construction at Little River Inlet would have little or no adverse effect on the beach erosion and hurricane project along the southern shores of Brunswick County, North Carolina. This is discussed in Appendix B.

48. With reference to S. C. Wildlife Resources Department's recommendation conceerning disposal of dredged material, laboratory tests indicate that all dredged materials will be of sufficiently high quality to be used in dike construction or for beach nourishment; therefore, need for an inland disposal area is not anticipated. If materials unsuitable for beach nourishment are discovered, they would be placed in nearby AIWW disposal areas which are on relatively high ground. These disposal areas are essentially sand bars with low to negligible fish and wildlife value.

49. Local cooperation. Local interests have given assurances of cooperation in the project subject to availability of funds. Assurances have been given by the Horry County Planning and Promotion Commission in a letter appearing in Appendix I. This Commission was established under the laws of South Carolina, and its competency to offer such assurances has been supported by legal opinion. Supplemental assurances with respect to land located in North Carolina have been given by the Brunswick County Commissioners. Their letter also appears in Appendix I.

APPORTIONMENT OF COSTS

50. Apportionment of first costs. The degree of Federal participation in navigational improvements serving recreational craft and commercial craft is dependent upon the allocation of benefits into "General" and "Local" categories, as shown in Table H-3, Appendix H. Generally, benefits attributable to recreational craft are 50 percent general and 50 percent local, while those attributed to commercial craft are all general. This results, in Table H-3, in Federal cost

sharing of 91.8 percent for general navigation facilities, and non-Federal sharing of 8.2 percent of these costs. Aids to navigation are 100 percent Federal, while the costs of lands and acquisition are all non-Federal. Estimated costs of the improvement and cost apportionment between Federal and non-Federal interests are given in Table 10.

TABLE 10

APPORTIONMENT OF FIRST COST

Item	First Cost
FEDERAL COSTS	
Corps of Engineers-General Navigation Facilities	$6,271,000
Coast Guard-Aids to Navigation	33,000
Total, Federal	$6,304,000
NON-FEDERAL COSTS	
Cash Contribution-General Navigation Facilities	$ 557,000
Lands and Acquisition-General Navigation Facilities	512,000
Total, Non-Federal	$1,069,000
TOTAL PROJECT FIRST COST	$7,373,000

51. Apportionment of maintenance costs. Present Federal policy requires that non-Federal interests pay that part of maintaining the general navigational features of the project allocable to recreation. This non-Federal share is presently estimated at $10,700, or 16.3% of the total estimated annual maintenance costs.

CONCLUSIONS

52. Conclusion. It is concluded that Federal assistance is warranted for providing a stabilized channel through the inlet with depths necessary to enable free and unhindered navigation through the inlet and inner channel. The proposed plan of improvement to accomplish these objectives is an entrance channel 12 by

300 feet across the seaward bar protected by two jetties, and an interconnecting channel 10 by 90 feet to the Atlantic Intracoastal Waterway. Jetties would be made sand impermeable and would extend oceanward 3,200 feet and 3,000 feet on the upcoast and downcoast sides of the inlet, respectively. Sand dikes would be constructed upcoast and downcoast to effect a contraction by tying the jetties to the shore.

53. It is further concluded that the proposed plan is economically justified on the basis of evaluated benefits and annual charges. It was determined to be the best plan to accomplish project objectives and would provide a maximum excess of benefits over costs.

54. Local interests have indicated a willingness to participate in the recommended project.

RECOMMENDATIONS

55. Recommendations. It is recommended that the proposed project for navigation be authorized for Little River Inlet, North Carolina and South Carolina, at an estimated cost to the United States of $6,304,000 for initial construction and $56,700 annually for maintenance; all generally in accordance with the plan of the District Engineer with such modification thereof as in the discretion of the Chief of Engineers, may be advisable; provided that, prior to construction, local interests agree to:

a. Provide without cost to the United States all necessary lands, easements, and rights-of-way required for construction and subsequent maintenance of the project including suitable disposal areas with any necessary retaining dikes, bulkheads, and embankments therefor;

b. Hold and save the United States free from damages that may result from construction and maintenance of the project;

c. Accomplish without cost to the United States alterations and relocations as required in sewer, water supply, drainage, and other utility facilities;

d. Provide, maintain, and operate without cost to the United States an adequate public landing or wharf with provisions for the sale of motor fuel, lubricants, and potable water open and available to all on equal terms;

e. Provide and maintain without cost to the United States depths in berthing areas and local access channels serving the terminals commensurate with depths provided in the related project areas;

83-941 O-72——4

f. Take action to place in effect necessary statutes and/or regulations which will protect the water quality for the authorized uses of the project. These regulations shall be in accordance with applicable laws and regulations of Federal, State and local authorities responsible for water quality control;

g. Provide a local share cash contribution in the amount of 8.2 percent of the general navigation facilities construction cost, which share is now estimated at $557,000; and

h. Provide a local cash contribution of 16.3 percent of the annual maintenance costs for general navigation facilities, an amount presently estimated to average $10,700 annually. This is to be paid by placing in an escrow account an amount sufficient to cover such costs for a period of five years. The amount of local cost sharing for this item is to be readjusted each five years commencing after the date of the signing of the formal agreement, in a manner considered appropriate by the Chief of Engineers, to reflect recreational benefits attributable to the project at that time, and to reflect reanalysis of expected maintenance costs.

BURKE W. LEE
Colonel, Corps of Engineers
District Engineer

[First endorsement]

SADYR (27 May 71)
SUBJECT: Review of Reports on Little River Inlet, North Carolina and South Carolina

DA, South Atlantic Division, Corps of Engineers, 510 Title Building, 30 Pryor Street, S. W., Atlanta, Georgia 30303 3 September 1971

TO: Chief of Engineers

Concur in the recommendation of the District Engineer.

R. H. FREE
Major General, USA
Division Engineer

APPENDIX H

COST ESTIMATES AND COST APPORTIONMENT

TABLE OF CONTENTS

TEXT

TABLES

APPENDIX H

COST ESTIMATES AND COST APPORTIONMENT

COST ESTIMATES

1. First costs. Estimates of first costs, based on July 1970 price levels, are given in Table H-1. Items of cost include:

a. Jetties. Estimated first costs of jetties are for stone structures on both sides of the inlet. Unit cost of stone is varied with size and placement requirement. The specific gravity was considered to be 2.6 for all stone. For the purpose of computation, the source of stone is considered to be quarries located in the Columbia, South Carolina, area. Stone would be delivered by rail to railheads at Myrtle Beach where trucks or barges will then transport it to the project site. Typical jetty sections are shown on Plate 3.

b. Excavation. First cost estimates for excavating channels and borrow material from the harbor are based on costs experienced for similar dredging work at nearby Federal projects using a conventional hydraulic dredge. Unit cost of dredging was assumed to vary with the degree of protection available to the dredge which would be subjected to more wind and wave action operating in the entrance channel area than it would while dredging the inner channel.

c. Sand dikes. Material dredged from the entrance channel and borrow area would be used to construct the sand dikes. Placement cost of this sand is included in the unit cost of dredging. Estimated first costs for sand dikes include the cost for shaping and grassing and for riprap protection of the harbor face of the north dike as shown on Plate 1. Grassing costs have been based on experienced costs for similar work done in North Carolina.

d. Model study. First costs for a model study are estimated by the Vicksburg Waterways Experiment Station at Vicksburg, Mississippi to be approximately $100,000. This cost is included as an engineering and design item.

e. Lands and acquisition. These first cost estimates were based on the fair market value of lands required for construction and maintenance of jetties and sand dikes.

f. Aids to navigation. Estimated costs for aids to navigation were determined by the U. S. Coast Guard. Their estimates are included in Appendix I as Exhibit I-1.

TABLE H-1

ESTIMATE OF FIRST COST

Item	Unit	Quantity	Unit Cost	Cost
GENERAL NAVIGATION FACILITIES				
Upcoast Jetty Construction:				
Armor stone	Tons	67,900	$20	$1,358,000
Core stone and toe protection stone	Tons	11,400	14	159,600
Foundation stone	Tons	33,800	13	439,400
Downcoast Jetty Construction:				
Armor stone	Tons	70,800	$20	$1,416,000
Core stone and toe protection stone	Tons	14,400	14	201,600
Foundation stone	Tons	33,600	13	436,800
Total Cost of Jetties				$4,011,400
Excavation:				
Inner channel	CY	35,000	$0.75	$ 26,250
Entrance channel	CY	359,000	0.80	287,200
Borrow area	CY	747,000	0.75	560,250
Total				$ 873,700
Sand Dikes Construction:				
Shaping	Lump Sum	--	--	$ 20,000
Riprap	Tons	11,700	$14	163,800
Foundation stone for riprap	Tons	6,000	13	78,000
Grassing	Acres	40	2,500	100,000
Total				$ 361,800
Sub-Total				$5,246,900
Contingencies (15%)				$ 787,100
CONSTRUCTION COST OF GENERAL NAVIGATION FACILITIES				$6,034,000
Engineering & Design, excluding model study (6.0%)				$ 362,100
Model Study				100,000
Supervision & Administration (5.5%)				331,900
Lands & Acquisition (Gen. Nav. Fac.)	Acres	64	$8,000	$ 512,000
TOTAL COST OF GENERAL NAVIGATION FACILITIES				$7,340,000
AIDS TO NAVIGATION	Lump Sum			33,000
TOTAL PROJECT FIRST COST				$7,373,000

2. Annual charges. Estimates of annual charges are based on a project life of 50 years and an interest rate of five and three-eighths percent. The average annual costs are computed in Table H-2.

TABLE H-2

AVERAGE ANNUAL COSTS

GENERAL NAVIGATION FACILITIES (Excluding lands):	
Interest (5.375% X $6,828,000) =	$ 367,000
Amortization (0.423% X $6,828,000) =	28,900
Maintenance	
Jetty & sand dikes (1% X $5,608,000) =	56,100
Inner channel ($0.75 X 10,000 C.Y.) 1.282 1/ =	9,600
Total	$ 461,600
LANDS AND ACQUISITIONS (General navigation facilities):	
Interest (5.375% X $512,000) =	$ 27,500
Amortization (0.423% X $512,000) =	2,200
Total	$ 29,700
AIDS TO NAVIGATION:	
Interest (5.375% X $33,000) =	$ 1,800
Amortization (0.423% X $33,000) =	100
Maintenance (lump sum) =	1,700
Total	$ 3,600
TOTAL AVERAGE ANNUAL COSTS	$ 494,900

1/ Contingency, Engineering & Design, and Supervision & Administration.

COST APPORTIONMENT

3. Allocation of benefits. Allocation of project benefits are computed to determine what proportion of the navigation facilities first costs, exclusive of navigation aids and lands for general navigation facilities, will be apportioned to the Federal and non-Federal interests. Benefits from reduction in vessel operating costs, accrue only to the commercial fishing industry. Total benefits accruing to the project from the elimination of vessel damage are separated into recreational and commercial portions on the basis of the ratio of annual returns to present users of the inlet for these two sources of benefit. Harbor of refuge benefits accruing to transients are allocated entirely to commercial fishing operations since it is unlikely that transient vessels seeking refuge will be employed in anything other than a commercial venture. Eight commercial fishing boats and 18 charter boats harbored at Little River Inlet would also receive harbor of refuge benefits. Allocation of benefits to general and local interests is shown in Table H-3.

TABLE H-3

ALLOCATION OF ANNUAL BENEFITS

Type of Benefit	Allocated Benefits		
	Total	General	Local
ANNUAL BENEFITS			
Recreational boating	$113,300	$ 56,650	$ 56,650
Commercial charter boat operation	266,800	266,800	0
Commercial fishing	333,100	333,100	0
Reduction in operating cost	2,000	2,000	0
Elimination of vessel damage ($28,000):			
Recreational	8,700	4,350	4,350
Commercial	19,300	19,300	0
Harbor of refuge ($5,000):			
Recreational	0	0	0
Commercial	5,000	5,000	0
Total	$748,200	$687,200	$ 61,000
PERCENT OF TOTAL ANNUAL BENEFITS	100.0%	91.8%	8.2%

4. Apportionment of costs. First and average annual costs are apportioned to Federal and non-Federal interests as shown in Tables H-4 and H-5. In the apportionment of annual maintenance costs, it should be noted that present Federal policy requires that a non-Federal public body agree to contribute that part of the cost of maintaining the general navigation features of the project allocable to recreation; that is, that fraction of the maintenance costs represented by the ratio of recreational benefits to total benefits (here 16.3 percent).

TABLE H-4

APPORTIONMENT OF FIRST COST

Item	Percent Apportionment	First Cost	Apportioned First Cost
FEDERAL			
Corps of Engineers, general navigation facilities	91.8%	$6,828,000	$6,271,000
Coast Guard, aids to navigation	100.0%	33,000	33,000
Total			$6,304,000
NON-FEDERAL			
Cash contribution general navigation facilities	8.2%	$6,828,000	$ 557,000
Lands and acquisition, general navigation facilities	100.0%	512,000	512,000
Total			$1,069,000
TOTAL PROJECT FIRST COST			$7,373,000

TABLE H-5

APPORTIONMENT OF AVERAGE ANNUAL COST

Item	Percent Apportionment	Average Annual Cost	Apportioned Average Annual Cost
FEDERAL			
Corps of Engineers, general navigation facilities:			
Interests and amortization	91.8%	$395,900	$363,600
Maintenance	83.7%	65,700	55,000
Coast Guard, aids to navigation			
Interest and amortization	100.0%	1,900	1,900
Maintenance	100.0%	1,700	1,700
Total			$422,200
NON-FEDERAL			
Cash contribution, general navigation facilities			
Interest and amortization	8.2%	$395,900	$ 32,300
Maintenance 1/	16.3%	65,700	10,700
Lands and acquisition, general navigation facilities			
Interest and amortization	100.0%	29,700	29,700
Total			$ 72,700
TOTAL NAVIGATION AVERAGE ANNUAL COST			$494,900

1/ From Table H-3: ($122,000/$748,200) x 100 = 16.3%)

APPENDIX I

LOCAL COOPERATION AND COORDINATION WITH OTHER AGENCIES

APPENDIX I

LOCAL COOPERATION AND COORDINATION WITH OTHER AGENCIES

LIST OF EXHIBITS

Exhibit No.	Agency	Date
I-1	United States Coast Guard Department of Transportation	5 May 1970
I-2	United States Department of the Interior Federal Water Pollution Control Admin.	15 June 1970
I-3	United States Department of Interior Fish and Wildlife Service	17 Sept 1970
I-4	North Carolina Department of Conservation and Development	10 June 1970
I-5	North Carolina Department of Water and Resources (Coordinating comments of other N.C. state agencies)	29 June 1970
I-6	South Carolina State Board of Health Pollution Control Authority	10 June 1970
I-7	South Carolina Water Resources Commission (Including letters from other S.C. state agencies)	25 June 1970
I-8	Horry County Planning and Promotion Commission	30 Sept 1970
I-9	United States Department of Interior Bureau of Outdoor Recreation	20 July 1971
I-10	Brunswick County Commissioners	4 Aug 1971

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

Address reply to:
COMMANDER (oan)
Seventh Coast Guard District
Room 1018, Federal Building
51 SW. 1st Avenue
Miami, Fla. 33130

3260
Serial: 2056
5 May 1970

From: Commander, Seventh Coast Guard District
To: District Engineer, Corps of Engineers, Charleston District, Charleston, S. C.

Subj: Navigation Study for Little River Inlet

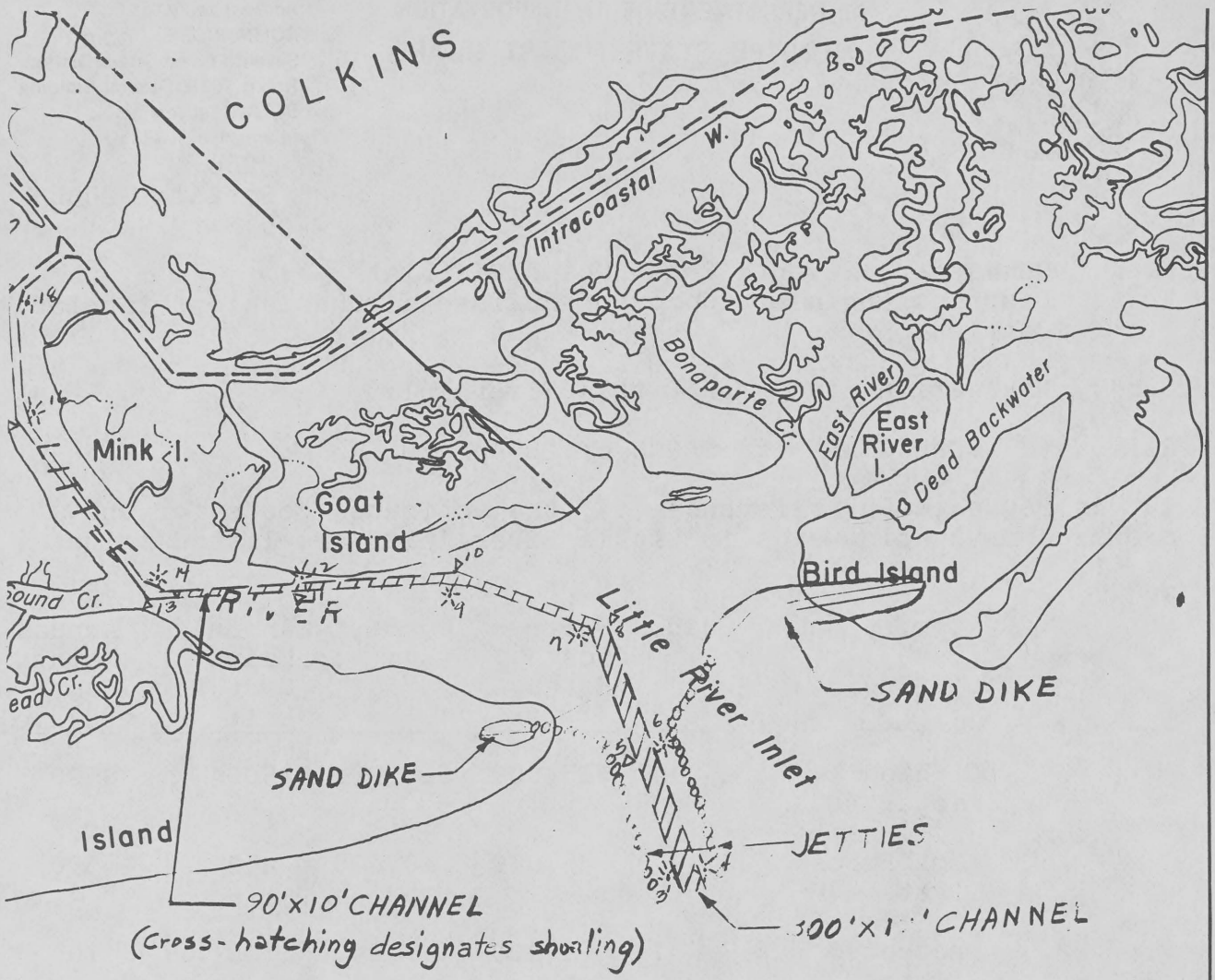
Ref: (a) COFE CHASN ltr SANGC of 28 Apr 70

1. As requested by reference (a), the estimated costs for the proposed navigation aids in Little River Inlet are listed below:

1 No.	2 Item (Type of Aid)	3 Quan.	4 Unit Cost to Estab.	5 Cost (3)x(4)	6 Annual Maint. Cost Per Unit	7 Annual Maint. Cost (3)x(6)
	Lighted Range	1	$15,000	$15,000	$500	$500
3, 4	Semi Exposed Lights	2	5,000	10,000	250	500
6, 7, 9, 12, 14, 16, 18	Protected Lights	7	1,000	7,000	100	700
5, 8, 10, 11, 13, 15, 17	Daybeacons	7	200	1,400	0	0
Total				$33,400		$1,700

H. C. WIATT
By direction

Encl: (1) Little River - General Map



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LITTLE RIVER N.C. & S.C.
FOR NAVIGATION
GENERAL MAP
1000 0 1000 3000 5000
SCALE IN FEET

UNITED STATES
DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION
Middle Atlantic Region
918 Emmet Street
Charlottesville, Virginia 22901

June 15, 1970

Col. Burke Lee
District Engineer
U. S. Army Engineer District, Charleston
P. O. Box 919
Charleston, South Carolina 29402

Dear Colonel Lee:

In regard to your letter of May 13, dealing with dredging in the Little River Inlet in South Carolina, we wish to advise you that we have no objections to your plans as outlined in your letter..

Sincerely yours,

J. Gary Gardner
Director, Operations Office

83-941 O-72——5

United States Department of the Interior
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
PEACHTREE-SEVENTH BUILDING
ATLANTA, GEORGIA 30323

September 17, 1970

District Engineer
U.S. Army, Corps of Engineers
Charleston, South Carolina

Dear Sir:

In response to your May 11, 1970, letter, the Bureau of Sport Fisheries and Wildlife, in cooperation with the South Carolina Wildlife Resources Department, the North Carolina Wildlife Resources Commission, and the North Carolina Division of Commercial and Sports Fisheries, has reviewed the proposed navigation plan for Little River Inlet, South Carolina. Authority for your study is contained in Senate and House resolutions dated September 23, 1965. These comments are submitted in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

The proposed plan calls for a 300-foot wide channel, 12 feet deep, extending from that depth in the Atlantic Ocean through the outer bar to an inner channel 90 feet wide and 10 feet deep. The proposed plan of improvement includes two impermeable jetties to protect the entrance channel with sand dikes to tie them to the shore (see plate).

It is estimated that 52,000 cubic yards of material will be dredged initially from the inner channel shoals. Annual maintenance will require dredging approximately 6,000 cubic yards. Dredged materials will be placed on the beach and in the sand dikes along with materials from the entrance channel and the borrow area. The proposed borrow area will only be used if the dredged materials do not contain suitable materials for the sand dikes. In the event that unsuitable material is discovered and disposal areas are required, those provided for the Atlantic Intracoastal Waterway project will be used. Diking of these areas would be required before any material from the Little River Inlet project would be deposited.

Fish and wildlife resources are of low to negligible value in the immediate project area. The disposal areas of the Atlantic Intracoastal Waterway have been previously used and the borrow area is essentially a sandbar. Although some temporary siltation problems will result from the dredging, adverse effects on fish and wildlife are not expected to be significant.

Your letter contained the following projected annual catches used as part of the justification for construction of this project, with a request for an evaluation of the ability of nearby fishing grounds to produce these quantities.

Projected Annual Catches at Little River Inlet

	Catches in Short Tons	
Year	Shrimp	Finfish
1968	65	183
1975	142	389
1980	152	469
1985	163	568
1990	175	690
1995	175	823
2000	175	985
2005	175	1,155
2010	175	1,355
2015	175	1,558
2020	175	1,792

The Bureau of Commercial Fisheries advises that these projections are not unrealistic provided that the estuarine nursery grounds essential to the continued productivity of these marine resources can be maintained in their present condition throughout the life of the project.

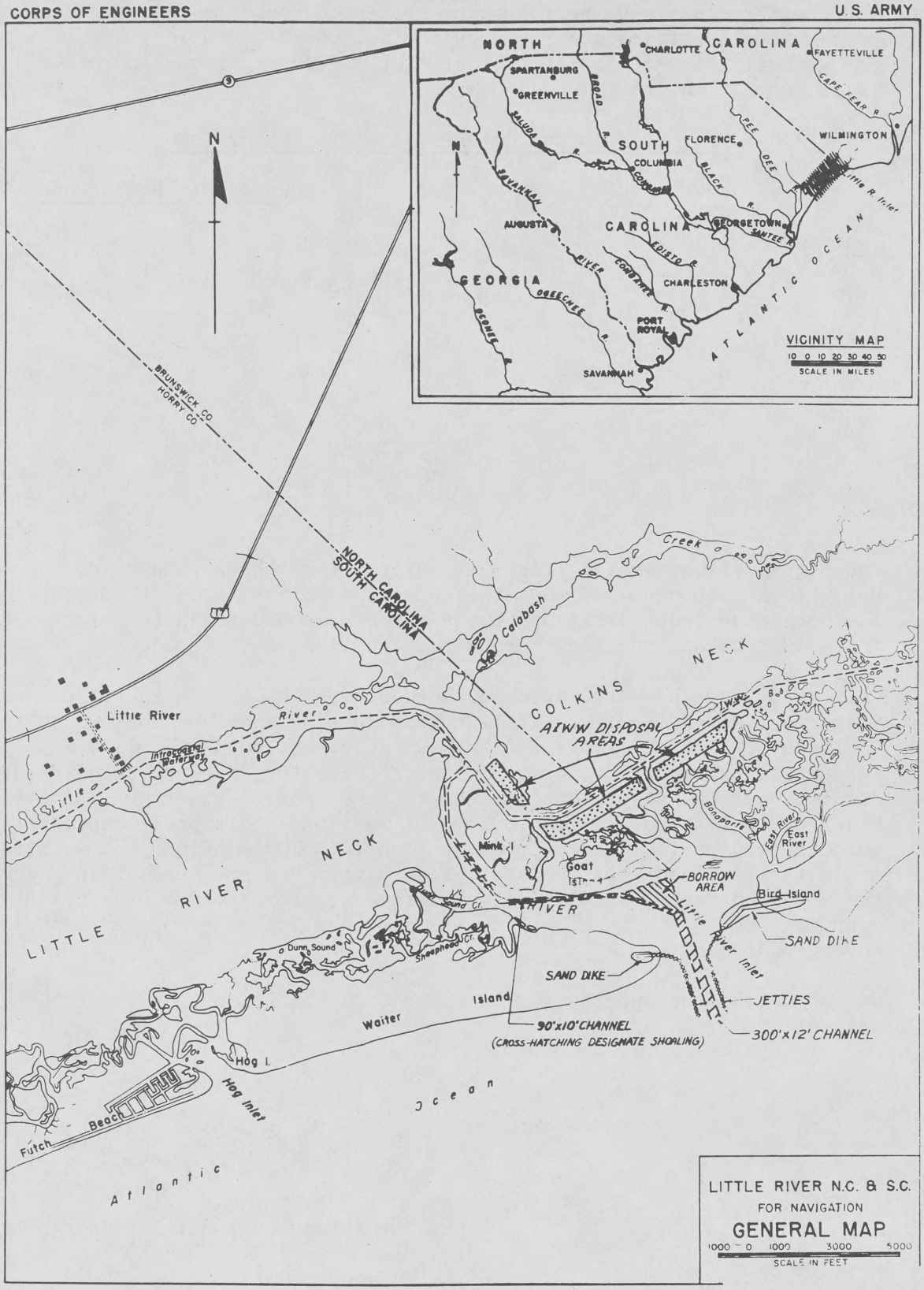
This report has been reviewed and concurred in by the Bureau of Commercial Fisheries, North Carolina Wildlife Resources Commission, North Carolina Division of Commercial and Sports Fishereis, and South Carolina Wildlife Resources Division. Copies of Assistant Director Hazel's, Chief Estuarine Studies Section Brown's and Executive Director Webb's letters are attached. Mr. Brown's letter of August 20, 1970, mentions additional considerations which should be included in project plans, including timing of work to avoid the period of maximum biological activity during the spring, summer, and early autumn months; and stockpiling sand for jetty construction above mean high water and pushing into place with a bulldozer or similar earth-moving equipment.

We appreciate the opportunity to comment on the proposed plans for this project.

Sincerely yours,

W. L. Towns
Acting Regional Director

4 Attachments


NORTH CAROLINA
CHARLOTTE
FAYETTEVILLE
SPARTANBURG
GREENVILLE
BROAD R.
CAPE FEAR R.
SALUDA R.
SOUTH CAROLINA
FLORENCE
WILMINGTON
PEE DEE R.
COLUMBIA
BLACK R.
Little R. Inlet
SAVANNAH R.
AUGUSTA
CAROLINA
GEORGETOWN
SANTEE R.
EDISTO R.
GEORGIA
COOSAWHATCHEE R.
CHARLESTON
ATLANTIC OCEAN
PORT ROYAL
ASHEPOO R.
SAVANNAH
VICINITY MAP
10 0 10 20 30 40 50
SCALE IN MILES
N
BRUNSWICK CO.
HORRY CO.
NORTH CAROLINA
SOUTH CAROLINA
Creek
Calabash
COLKINS NECK
Little River
River
Intracoastal Waterway
AIWW DISPOSAL AREAS
Bonaparte
East River
East River I.
Mink I.
Goat Island
BORROW AREA
Bird Island
LITTLE RIVER NECK
LITTLE RIVER
Dunn Sound Cr.
Little River Inlet
SAND DIKE
Dunn Sound
Sheephead Cr.
SAND DIKE
JETTIES
Island
Waiter
90'x10' CHANNEL
(CROSS-HATCHING DESIGNATE SHOALING)
300'x12' CHANNEL
Hog I.
Ocean
Hog Inlet
Beach
Futch
Atlantic
LITTLE RIVER N.C. & S.C.
FOR NAVIGATION
GENERAL MAP
1000 0 1000 3000 5000
SCALE IN FEET

South Carolina
WILDLIFE RESOURCES DEPARTMENT
POST OFFICE BOX 167 COLUMBIA, SOUTH CAROLINA 29202

• **JAMES W. WEBB**
EXECUTIVE DIRECTOR

• **PAT RYAN**
DIRECTOR, DIVISION OF GAME AND FRESHWATER FISHERIES

• **DR. JAMES A. TIMMERMAN, JR.**
DIRECTOR, DIVISION MARINE RESOURCES

July 27, 1970

Mr. Ernest C. Martin
Assistant Regional Director
Bureau of Sport Fisheries & Wildlife
Peachtree-Seventh Building
Atlanta, Georgia 30323

Dear Mr. Martin:

Thanks very much for your letter of July 20, 1970, enclosing a copy of your proposed report on Little River Inlet, South Carolina.

We concur with the findings in your report.

Yours very truly,

James W. Webb

JAMES W. WEBB
Executive Director

JWW/sa

State of North Carolina
Department of
Conservation and Development
Raleigh 27602

ROBERT W. SCOTT
GOVERNOR

ROY G. SOWERS, JR.
DIRECTOR

TELEPHONE
AREA CODE 919-829-4177

Div. Commercial and Sports Fisheries
P. O. Box 338, Morehead City, N. C. 28557

August 20, 1970

Mr. Ernest C. Martin, Asst. Reg. Director
U. S. Fish and Wildlife Service
Bureau of Sport Fisheries and Wildlife
Peachtree-Seventh Building
Atlanta, Georgia 30323

Dear Mr. Martin:

Subject: Little River Inlet, South Carolina and North Carolina

I have reviewed your proposed report of the subject project and do concur in the report. Our division did have, however, additional considerations which we had hoped could be included in the project plans to minimize siltation during construction of the proposed sand dikes connecting the jetties with the shore line.

Enclosed for your information, is a copy of my inter-agency memorandum dated June 10, 1970, to Asst. Fisheries Commissioner, Edward Wade. Also attached is a copy of a similar memorandum dated May 30, 1968, expressing the need for a navigation project in Little River Inlet.

Cordially yours,

J. T. Brown

James T. Brown, Chief
Estuarine Studies Section

JTB/rt
Encls.

State of North Carolina
Department of
Conservation and Development
Raleigh 27602

COPY June 10, 1970 COPY

MEMORANDUM TO: Dr. David A. Adams

FROM: James T. Brown

SUBJECT: Colonel Lee's Letter of 1 June 1970 Concerning Dredging in Little River Inlet, South Carolina

I have inspected the project plans for Little River Inlet and note that spoil material, if suitable, will be used to construct a sand dike connecting the west end of Bird Island with the stone jetty located east of the channel. Spoil material, if unsuitable for the dike, may be placed upon existing spoil areas adjacent to the Intracoastal Waterway inside North Carolina. If at all feasible, the spoil for sand dike construction should be stock-piled on the beach and later pushed into place by dozer or other means. This would greatly minimize the degree of siltation which would result if the dike is formed by direct pumping in place. Adequate dikes should be provided if any material is pumped on existing IWW spoil areas.

Dredging of this project should be accomplished during the colder winter months in order not to interfere with the period of maximum activities of sports and commercial fishermen and, also, to have the least possible adverse effects on the biological productivity of this area.

Having seen South Carolina and southern North Carolina charter vessels from the Little River area traveling the waterway all the way to Southport in order to fish offshore, there is little doubt that serious thought should be given to provision of navigable channel through Little River Inlet. Such a channel would undoubtedly provide better access to the ocean for fishing vessels of both states.

It is also probable that the expected increased exchange of water would be of some benefit in decreasing the pollution factor so prevalent in our waters west of Sunset Beach bridge which is thought to originate in the Little River area. If spoil disposal is done in a proper manner and placed on the least productive areas (which in some places would incur additional cost), this project should be beneficial to both commercial and recreational interests in the vicinity.

We would welcome the opportunity to work with Col. Rich, District Engineer of the S.C. Corps District, in his navigation study in order that maximum benefits can occur with the least detrimental effects to fish and wildlife.

State of North Carolina
Wildlife Resources Commission
RALEIGH, N. C. 27602

July 23, 1970

Mr. Ernest C. Martin
Assistant Regional Director
U. S. Fish and Wildlife Service
Peachtree-Seventh Building
Atlanta, Georgia 30323

Dear Mr. Martin:

Reference is made to your letter of July 20, 1970 concerning Little River Inlet.

We concur in your comments.

Sincerely,

Robert B. Hazel
Assistant Director
Field Operations

RBH:dt

State of North Carolina
Department of
Conservation and Development

Raleigh 27611

ROBERT W. SCOTT
GOVERNOR

ROY G. SOWERS, JR.
DIRECTOR

June 10, 1970

DIVISION OF COMMERCIAL
AND SPORTS FISHERIES
TELEPHONE 829-3767

Colonel Burke W. Lee
Corps of Engineers
District Engineer
Department of the Army
P. O. Box 919
Charleston, South Carolina 29402

Dear Colonel Lee:

As a result of inspection by my field personnel, I have no objections to construction of the proposed project provided:

(1) If at all feasible, the spoil for sand dike construction should be stock-piled on the western beach of Bird Island and later pushed into place by dozer or other means. This would greatly minimize the degree of siltation which would result if the dike is formed by direct pumping in place.

(2) Adequate dikes should be provided if any material is pumped on existing IWW spoil areas.

(3) Dredging of this project should be accomplished during the colder winter months in order not to interfere with the period of maximum activities of sports and commercial fishermen and, also, to have the least possible adverse effects on the biological productivity of this area.

I appreciate the opportunity to provide comments pertaining to this project.

Sincerely,

Thomas L. Linton

Thomas L. Linton
Commissioner

TLL:dpb

WS 70 RJBP

June 29, 1970

Colonel Burke W. Lee, Jr.
District Engineer
U.S. Army Engineer District, Charleston
Corps of Engineers
P.O. Box 919
Charleston, South Carolina 29402

Dear Colonel Lee:

This is in response to your letter of June 1st concerning your navigation plan for Little River Inlet, South Carolina. At a public hearing on the project on June 27, 1968, a representative of this Department advised that the work contemplated at Little River Inlet could affect the Brunswick County beaches and inlets in North Carolina. He asked that the study take these effects into consideration, and give full consideration to the relationship of the project to the authorized beach erosion and hurricane protection project called "Cape Fear to North Carolina-South Carolina State Line". It is assumed that this was done in reaching the findings expressed in your letter.

The State of North Carolina favors the project. It is requested that spoil for the sand dike at the western end of Bird Island be stockpiled and dozed into place to minimize siltation, and that the work be done during the colder winter months to avoid interference with fishermen and minimize adverse effects on the biological productivity of the area. It is noted that you plan that AIWW spoil areas would be diked.

The opportunity to comment is appreciated.

Sincerely,

George E. Pickett

George E. Pickett
Director

cc: Mr. R. B. Hazel
Dr. Thomas Linton

South Carolina State Board of Health

AUTHORITY MEMBERS

E. KENNETH AYCOCK, M.D. - CHAIRMAN
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WILLIAMS H. MILLER - PAPER AND PULP
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F. BARTOW CULP - - - - - WILDLIFE
CHARLESTON

Pollution Control Authority

W. T. LINTON, EXECUTIVE DIRECTOR

J. MARION SIMS BUILDING

Columbia, South Carolina 29201

AREA CODE 803
TELEPHONE: 758-5631

June 10, 1970

Col. Burke W. Lee
Corps of Engineers
District Engineer
Department of the Army
P. O. Box 919
Charleston, South Carolina 29402

Dear Col. Lee:

We have your letter of June 1, 1970, relative to the proposal of the Corps of Engineers to perform certain dredging in the Little River area of Horry County.

The area involved is one which is closed to shellfish harvesting at the present time due to discharge of waste. It is hoped that eventually this area can be cleaned up to the extent that oyster harvesting will be permitted.

We do not believe, however, that the proposal you are making will interfere with this possibility. Consequently, we would inject no opposition to the proposal as submitted. We assume that this is nothing but a dredging operation and there will be no discharge to the waters of that area.

Yours very truly,

H. J. Webb, Ph.D.
Associate Director
Pollution Control Authority

HJW/dkw

STATE OF SOUTH CAROLINA WATER RESOURCES COMMISSION

CLAIR P. GUESS, JR., EXECUTIVE DIRECTOR

2414 BULL STREET, COLUMBIA, S. C. 29201

TELEPHONE (803) 758-2514

June 25, 1970

Burke W. Lee
Colonel, Corps of Engineers
District Engineer
P. O. Box 919
Charleston, S. C. 29402

Dear Col. Lee:

We have been holding the proposed navigation plan for Little River Inlet, South Carolina in this office in order to obtain the comments on this project from other State agencies. To this date, we have received comment from the State Highway Department, the State Department of Agriculture, Clemson University, and the State Development Board. We also have comments forwarded by the South Carolina Wildlife Resources Department.

To summarize the comments received is merely to say that all State agencies which have commented are unilaterally in favor of the proposed project and urge its implementation. The Wildlife Resources Department recommends that any spoiled material which can not be used for beach nourishment be placed in an area above the mean high water mark.

The South Carolina Water Resources Commission urges the approval and implementation of this plan.

Copies of the comments which have been received, including those of the Wildlife Resources Department are attached herewith.

With kind regards.

Sincerely yours,

James L. Aull
Assistant Director

JLA/ps

SOUTH CAROLINA
STATE HIGHWAY DEPARTMENT
DRAWER 191
COLUMBIA, S. C. 29202

June 11, 1970

Mr. Clair P. Guess, Jr.
Executive Director
S. C. Water Resources Commission
2414 Bull Street
Columbia, South Carolina 29201

Dear Mr. Guess:

I am in receipt of a letter dated June 1, 1970 from Colonel Burke W. Lee concerning the finalized navigation plan he expects to recommend for Little River Inlet, South Carolina. The letter included certain information on dredging of the channel and disposal of materials. He requested that this Department forward to you any comments we may have concerning the proposed work.

The proposal to place excavated sand material along the existing beaches appears to be a good way to nourish the beaches and arrest further erosion. The S. C. State Highway Department interposes no objection to the proposed work.

Yours very truly,

J. D. McMahan, Jr.
Deputy State Highway Engineer

cc:
Col. Burke W. Lee
Col., Corps of Engineers
District Engineer
P. O. Box 919
Charleston, S. C. 29402

SOUTH CAROLINA
DEPARTMENT OF AGRICULTURE
Post Office Box 12080
Columbia, South Carolina 29211

June 5, 1970

WILLIAM L. HARRELSON
Commissioner

Mr. Clair P. Guess, Jr.
Executive Director
Water Resources Commission
2414 Bull Street
Columbia, South Carolina 29201

Dear Mr. Guess:

We have, at the June 1, 1970, request of Colonel Burke W. Lee, reviewed the proposed project for Little River Inlet, South Carolina.

Such a project is not only feasible and worthwhile, but also the benefits received would far overshadow the cost of the navigation plan for Little River Inlet. The need for these works of improvement is great in the coastal area of our State.

Benefits received will be enjoyed by all citizens of our State who take pride in the protection and improvement of our South Carolina waterways.

Not only will navigation be eased in the area, but also the fishing industry of South Carolina will reap tremendous benefits from the improvements. In the future, the entire economy of the area will benefit from the project.

It is my hope that all possible speed will be used in the start and finish of these works of improvement for the entire State of South Carolina.

Very truly yours,

William L. Harrelson

William L. Harrelson
Commissioner of Agriculture

WLH:bjb

cc: Colonel Burke W. Lee
District Engineer
Corps of Engineers
P. O. Box 919
Charleston, South Carolina 29402

CLEMSON UNIVERSITY
CLEMSON, SOUTH CAROLINA 29631

OFFICE OF THE PRESIDENT

June 8, 1970

Mr. Clair P. Guess, Jr.
Executive Director
S. C. Water Resources Commission
2414 Bull Street
Columbia, South Carolina 29201

Dear Mr. Guess:

By letter dated June 1, 1970 Colonel Burke W. Lee, District Engineer, Corps of Engineers, Charleston District, has requested that I provide you with comments on the proposal by the Corps of Engineers on the navigation plan to be recommended for Little River Inlet, South Carolina.

After reviewing very carefully the information contained in Colonel Lee's letter, and examining the map which further describes the plan, I wish to advise that I can see no reason why the Corps of Engineers should not proceed as indicated.

Sincerely,

Robert C. Edwards
President

RCE/da/w

cc: Colonel Burke W. Lee

South Carolina **state development board**

June 12, 1970

Mr. Clair P. Guess, Jr.
South Carolina Water Resources Commission
2414 Bull Street
Columbia, South Carolina 29201

Dear Clair:

A letter of June 2 from Colonel Burke Lee (copy attached) to our State Development Board has been referred to me by our Acting Director, Al DeCicco.

Based upon the information I have, I see no problems involved for the existing beach and river environment in the plan Colonel Lee has outlined for the two proposed navigation channels.

I would like to reserve final judgment, though, for two weeks hence. You will receive another letter with my comments, based largely upon consultation with five other geologists each of whom has had some field experience in this general portion of the Horry County coastal area.

In addition, we have some Apollo 9 coverage of that area which may assist us somewhat in our recommendations.

Cordially,

Norman K. Olson
State Geologist
DIVISION OF GEOLOGY

NKO:fl
CC: Colonel Burke W. Lee
Mr. A. A. DeCicco
Mr. D. A. Duncan
Enclosures

July 14, 1970

Mr. Clair F. Guess, Jr., Executive Director
South Carolina Water Resources Commission
2414 Bull Street
Columbia, South Carolina 29201

Dear Clair:

This is a rather late follow up to my letter to you of June 12 concerning Colonel Burke Lee's request for comments on the Little River Inlet project of the Corps of Engineers.

I solicited the comments of five separate geologists, all of whom are familiar with Coastal Plain problems, and to varying extents with beach erosion. Captain H. D. Wagener, Geology Professor at The Citadel, remarked that some effort should be made to anticipate littoral drift. He went on to say that local eddies may partly negate the effect of southward moving longshore currents. Beach dumping may be justified on Waiter Island, but this should be checked for its possible effect along the shore of the island itself.

I did not receive replies from the other four geologists that I contacted. Two of them, Professors John Ferm and Donald J. Colquhoun of the Department of Geology, USC, would be worthwhile people to contact as a follow up on my note to them of June 12. Each has received a copy of Colonel Lee's letter to our Development Board explaining the purpose of the Little River Inlet project, as well as the accompanying map showing the proposed disposal areas.

Please contact me if there is any way in which we can assist you in reviewing the proposal.

Cordially,

Norman K. Olson
State Geologist
DIVISION OF GEOLOGY

NKO/sm
cc: Colonel Burke W. Lee
Mr. A. A. DeCicco
Mr. D. A. Duncan

83-941 O-72——6

South Carolina
WILDLIFE RESOURCES DEPARTMENT
POST OFFICE BOX 167 COLUMBIA, SOUTH CAROLINA 29202

• JAMES W. WEBB
EXECUTIVE DIRECTOR

• PAT RYAN
DIRECTOR, DIVISION
OF GAME AND
FRESHWATER FISHERIES

• DR. JAMES A. TIMMERMAN, JR.
DIRECTOR, DIVISION
MARINE RESOURCES

June 24, 1970

Mr. James L. Aull
Assistant Director
S. C. Water Resources Commission
2414 Bull Street
Columbia, S. C. 29209

Dear Jim:

Please find enclosed three reports giving our comments on Town Creek, Little River Inlet and Little River.

Sincerely,

John H. Quillen
Federal Aid Coordinator

JHQ/bkg

Enclosures/3

CC: Ed Latimer
River Basins in Raleigh, N. C.

Date: June 24, 1970

Project: Little River Inlet, Horry County

Comments by: S. C. Wildlife Resources Department

It is our understanding that the material dredged from this channel will be used as beach nourishment. In the event that any unsuitable material is found, we recommend that it be placed above the mean high water mark.

If this cannot be done and existing A. I. W. W. spoil disposal units are used, we recommend that the units be properly diked and the banks stabilized to cut siltation from construction and erosion to a minimum.

HORRY COUNTY **PLANNING & PROMOTION COMMISSION**

Box 263 Conway, S. C. 29526

April 26, 1971

Colonel Burke W. Lee
U. S. Army Corps of Engineers
Charleston District
P. O. Box 919
Charleston, South Carolina 29402

Dear Colonel Lee:

Thank you very much for your letter of April 22, 1971 regarding the changes that affect the local requirements. We were very happy to receive notification of this change.

We do however realize that non-Federal interest will be required, and we give the following assurances of cooperation for the execution of the Little River Inlet Navigation Project subject to the availability and appropriation of funds. These assurances are:

a. Provide without cost to the United States all necessary lands, easements, and rights-of-way required for construction and subsequent maintenance of the project including suitable disposal areas with any necessary retaining dike, bulkheads, and embankments therefor;

b. Hold and save the United States free from damages that may result from construction and maintenance of the project;

c. Accomplish without cost to the United States alterations and relocations as required in sewer, water supply, drainage, and other utility facilities;

d. Provide, maintain, and operate without cost to the United States an adequate public landing or wharf with provisions for the sale of motor fuel, lubricants, and potable water open and available to all on equal terms;

e. Provide and maintain without cost to the United States depths in berthing area and local access channels serving the terminals commensurate with depths provided in the related project areas;

f. Take action to place in effect necessary statutes and/or regulations which will protect the water quality for the

authorized uses of the project. These regulations shall be in accordance with applicable laws and regulations of Federal, State, and local authorities responsible for water quality control;

g. Provide a local share cash contribution in the amount of 8.1 percent of the general navigation facilities construction costs, which share is now estimated at $553,000 and

h. Provide a local cash contribution of 16.2 percent of the annual maintenance costs, an amount presently estimated to average $10,600 annually. The amount of local cost sharing of this item is to be readjusted each five years commencing after the date of the signing of the formal agreement, in a manner considered appropriate by the Chief of Engineers, to reflect recreational benefits attributable to the project at that time, and to reflect reanalysis of expected maintenance costs.

We acknowledge the present cost sharing, and although a formal committment from the local sponsor is not required until the project is authorized, please be advised that local interest have sincere intentions of meeting project requirements of cooperation.

I'm looking forward to seeing you and your associates at the public meeting May 6th.

Thank you very much for the interest, time, and effort your District Office is giving this much needed project.

Sincerely,

J. O. Baldwin

J. O. Baldwin, Sr., Chairman
Horry County Planning
& Promotion Commission

JOB/ss

United States Department of the Interior
BUREAU OF OUTDOOR RECREATION
SOUTHEAST REGIONAL OFFICE
810 New Walton Building
Atlanta, Georgia 30303

IN REPLY REFER TO:
E3027

JUL 20 1971

Colonel Burke W. Lee
District Engineer
U.S. Army Engineer District,
Charleston
Post Office Box 919
Charleston, South Carolina 29402

Dear Colonel Lee:

Reference is made to your letters of March 18, 1971, and June 11, 1971, in which you requested our views concerning the recreational aspects of the proposed project at Little River Inlet, North Carolina and South Carolina.

We have no comments at this time. This does not mean we necessarily agree or disagree with your findings.

Sincerely yours,

By Acting

Paul D. Adams
Chief, Water Resource and
Transportation Studies Division

BRUNSWICK COUNTY COMMISSIONERS
SOUTHPORT, N. C. 28461

August 4, 1971

Col. Burke W. Lee, District Engineer
Charleston District
Corps of Engineers
P. O. Box 919
Charleston, S. C., 29402

Re: Little River Inlet Project

Dear Sir:

The Brunswick County Board of Commissioners in session on August 2, 1971 acknowledged the following facts:

(1) That the Congress of the United States may, at some future date, authorize construction of a project for the navigational improvement of Little River Inlet in North Carolina and South Carolina.
(2) That local interests must agree to cooperate with the Federal government in certain particulars necessary for the construction and effective maintenance of such project.
(3) That the Horry County Planning and Promotion Commission has submitted to the United States government its written assurances of its willingness and ability to provide the required items of local cooperation.
(4) That, inter alia, the Horry County Planning and Promotion Commission has agreed "To provide without cost to the United States, all necessary lands, easements, and rights-of-way required for construction and subsequent maintenance of the project including suitable disposal areas with any necessary retaining dike, bulkheads and embankments therefor".
(5) That certain lands for which such rights must be acquired lie in the County of Brunswick and the State of North Carolina.
(6) That a public instrumentality of the County of Horry, in the State of South Carolina, lacks explicit legal authority to acquire rights to land lying outside Horry County.
(7) That the construction of such a project would benefit the citizens of Brunswick County, North Carolina.

In recognition of these facts, the Board of County Commissioners of Brunswick County, North Carolina, agrees, that with respect to land located in Brunswick County, North Carolina, it will provide without cost to the United States all necessary lands, easements, and rights-of-way required for construction and subsequent maintenance of the project including suitable disposal area with any necessary retaining dike, bulkheads, and embankments therefor,consistent with the laws of North Carolina. The above should not be construed that Brunswick County is in any way assuming any financial responsibility for this project.

Very truly yours,

W. A. Kopp, Jr.
Chairman
Board of County Commissioners
Brunswick County, North Carolina

WAK:cg

SUPPLEMENT

INFORMATION CALLED FOR
BY SENATE RESOLUTION 148,
85TH CONGRESS, 1st SESSION,
ADOPTED 28 JANUARY 1958

SUPPLEMENT

INFORMATION CALLED FOR BY SENATE RESOLUTION 148

1. Introduction. The information in this supplement is furnished in response to Senate Resolution 148, 85th Congress, 1st Session, adopted January 28, 1958. That resolution calls for data in addition to that now presented in support of projects recommended for authorization and on possible alternatives thereto. Emphasis is given to reasons why alternatives are rejected in favor of recommended projects and the effects of alternative standards of evaluation, economic analysis, and cost allocation on project feasibility, scope, and cost-sharing arrangements.

2. Project description and economic life. Little River rises in Little River Swamp in the extreme northeastern part of South Carolina, flows generally east, parallel to the coast and enters the Atlantic Ocean at Little River Inlet, near the North Carolina-South Carolina state line. The Intracoastal Waterway enters Little River approximately 2.4 miles above the mouth of the river. The recommended navigation project provides for an entrance channel 12 by 300 feet across the seaward bar; thence, 10 x 90 feet to the Atlantic Intracoastal Waterway; and ocean jetties extending 3,200 feet and 3,000 feet on the upcoast and downcoast sides of the inlet, respectively. The recommended plan of improvement would serve present and prospective commercial and recreational craft. Estimated economic project life is 50 years. Analysis on the basis of 100-year life would not change the relative economic merits of the considered plan nor materially affect the local participation.

3. Project costs and justification. Estimated first cost of the project is $7,373,000 and is presented in detail in Appendix H of the basic report. Tangible benefits are derived from enhanced recreational boating and commercial charter boat operations, new boats added to the fleet, increased commercial seafood landings, reduction of vessel damage and operating cost, and provision of an all-tide harbor of refuge during storms. Estimates of benefits are found in Appendix G of the basic report. Cost and benefits for 50 and 100-year evaluation periods are summarized below. Costs are estimated at July 1970 price levels and the interest rate is five and three-eighths percent for both Federal and non-Federal costs.

Item	Costs and Benefits	
	50-year life	100-year life
FIRST COST:		
Federal	$6,304,000	$6,335,000
Non-Federal	1,069,000	1,038,000
TOTAL FIRST COST	$7,373,000	$7,373,000
AVERAGE ANNUAL COSTS:		
Capital costs	$ 428,000	$ 399,000
Maintenance and replacement costs	67,000	67,000
TOTAL ANNUAL COSTS	$ 495,000	$ 466,000
AVERAGE ANNUAL BENEFITS:		
Recreational boating	$ 113,000	$ 125,000
Commercial charter boating	267,000	331,000
Commercial fishing	333,000	376,000
Reduction of vessel operating costs	2,000	2,000
Elimination of vessel damage	28,000	28,000
Harbor of refuge	5,000	5,000
TOTAL ANNUAL BENEFITS	$ 748,000	$ 867,000
RATIO OF BENEFITS TO COSTS	1.5:1	1.9:1

4. Intangible project effects. Since the economy of Little River is based on recreational and commercial fishing, the project would give assurance to the continued economic growth of the area. The improvement would have minor effects on fish and wildlife resources, pollution abatement, land enhancement and shore protection. The project should greatly reduce the present hazards to the lives of boatmen using this inlet.

5. Physical feasibility and cost of providing for future needs. The recommended improvement would provide for the foreseeable future needs of commercial and recreational small craft for the 50-year assumed life of the project. Channel dimensions recommended are considered adequate for the types of traffic in prospect.

6. Allocation of costs. No allocation of costs among water uses or purposes is involved in this report, the single purpose being navigation.

7. Extent of interest in project. The states of North Carolina and South Carolina and other local interests are extremely interested in improving the inlet. Their views, presented in Appendix A of the basic report, are that the project will help satisfy the demand for recreational fishing and seafood catches in the area and provide a needed harbor of refuge. The local sponsor, the Horry County Planning and Promotion Commission, has given assurance that local interest will participate in the construction and maintenance of the potential project. They have indicated a willingness and ability to cooperate in the construction and subsequent maintenance of the project.

8. Repayment schedules. The required non-Federal share of first cost of construction would be payable as a lump sum prior to commencement of construction.

9. Effect of project on State and local governments. The project would have negligible effects on community services and taxes. About 64 acres of beach-front property would be required for construction and maintenance of the proposed jetty system. Since this land is in such a hazardous location due to the unstable condition of the inlet, it is unlikely that substantial investments would be made in these lands, thus negligible loss of tax revenue would result. Lands required for the project would require no community services.

10. Alternate plans considered. Several possible solutions to the problem of providing a stabilized channel of sufficient depth and width for regular use by commercial and recreational fishing vessels were considered. Since experience has shown that it is not economically or physically feasible to maintain the inlet channel by dredging alone, a proper solution must include structural controls. Structural alternatives considered include provisions for intercepting and trapping sands moving longshore, for sheltering using vessels from wave action, and for maintaining channel alignment. Jetties springing from barrier beaches on both sides of the inlet were found to be the best solution for maintaining specified alignments and for providing a sheltered approach. Intercepting and trapping of sand can be accomplished either by making the jetties complete littoral barriers, causing a sand fillet to form against them, or by providing some type of weir in the jetties over which sands flow to a deposition basin located within

the harbor. Sand trapped in the deposition basin would be pumped hydraulically upcoast or downcoast with a conventional pipeline dredge. Studies indicate that the littoral transport upcoast and downcoast is more or less balanced at Little River Inlet; thus, sand-bypassing facilities may not be needed. If it is determined through later studies and surveillance of the inlet that there is a predominate direction of sand movement, sands forming the fillet against the impermeable updrift jetty could be dredged and bypassed with one of the submarine-type dredges now under development. An alternate bypassing system would utilize the borrow area as a deposition basin which could be pumped out with a conventional hydraulic dredge. Each of these alternatives would accomplish the desired results, making selection of the best project purely a matter of economics. The best plan without sand-bypassing facilities is concluded to be the two-jetty system with impermeable jetties since it is clearly the least expensive satisfactory solution.

TO CALABASH, N.C.
1 MILE

TO
LITTLE RIVER, S.C.
2 MILES

ATLANTIC INTRACOASTAL WATERWAY

12'x90'

NORTH
SOUTH

MINK ISLAND

HORSE FORD CREEK

LITTLE RIVER

CLAYTON CREEK

CAROLINA
CAROLINA

BONAPARTE CREEK

GOAT ISLAND

LITTLE RIVER
NECK

BIRD ISLAND

NOTE:
DASHED CHANNEL
REQUIRES NO
EXCAVATION

RECOMMENDED
INNER CHANNEL
10'x90'

BORROW
AREA

RIPRAP

LITTLE RIVER INLET

RECOMMENDED
SAND DIKE

DUNN SOUND CREEK

RECOMMENDED
SAND DIKE

OCEAN

WAITER ISLAND

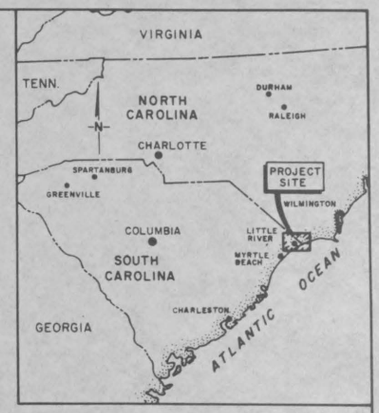
RECOMMENDED
ENTRANCE
CHANNEL
12'x300'

RECOMMENDED
UPCOAST JETTY

ATLANTIC

RECOMMENDED
DOWNCOAST
JETTY

N



VICINITY MAP

20 0 20 40 60
SCALE IN MILES

600 0 600 1200
SCALE IN FEET

LITTLE RIVER INLET, N. C. & S. C.
FOR NAVIGATION
GENERAL MAP & PLAN

SCALE AS SHOWN
SHEET 1 OF 1 SHEETS
U.S. ARMY ENGINEER DISTRICT, CHARLESTON, S.C.

SUBMITTED: For Emerson J. Morgan, CHIEF, COASTAL ENGR. & ENVIRONMENTAL BRANCH
RECOMMENDED: Arthur Rasmussen, For CHIEF, ENGINEERING DIVISION
APPROVED: Charles E. Eastburn, LTC., CORPS OF ENGINEERS, ACTG. DISTRICT ENGINEER

DRAWN BY: G.S.F.
CHECKED BY: A.A.O.
FILE NO.

FIGURE 2A

83-941 O-72 (Face p. 74)

ENVIRONMENTAL STATEMENT

FINAL

ENVIRONMENTAL STATEMENT

LITTLE RIVER INLET
NORTH CAROLINA AND SOUTH CAROLINA

NAVIGATION

OFFICE OF THE CHIEF OF ENGINEERS
DEPARTMENT OF THE ARMY
WASHINGTON, D. C. 20314

JUNE 1972

Little River Inlet, North Carolina and South Carolina - Navigation Improvements

( ) Draft (X) Final Environmental Statement

Responsible Office: U. S. Army Engineer District, Charleston, S. C.

1. Name of Action: ( ) Administrative (X) Legislative

2. Description of Action: Recommendation to Congress for authorization of a navigation project consisting of channels, jetties, and sand transition dikes at Little River Inlet, North Carolina and South Carolina.

3. a. Environmental Impacts: Improved navigability of inner channel and ocean entrance. Increase in time available for commercial fishing operations. Increased commercial and recreational potential for area.

b. Adverse Environmental Effects: Temporary increase in turbidity during construction and future maintenance operations.

4. Alternatives: No development.

5. Comments Received:

U. S. Department of the Interior
- Federal Water Pollution Control Administration
- Bureau of Outdoor Recreation
- National Park Service
- Bureau of Sport Fisheries and Wildlife

Environmental Protection Agency, Region 3
Environmental Protection Agency, Region 4
U. S. Department of Commerce - National Oceanic and Atmosphonic Adm.
U. S. Department of Health, Education and Welfare
U. S. Department of Transportation
State of South Carolina
- Office of the Governor; Division of Administration
- Water Resources Commission
- State Board of Health
- Wildlife Resources Commission

State of North Carolina
- Department of Natural and Economic Resources
- Department of Administration
- State Board of Health
- State Ports Authority
- Marine Science Council

Cape Fear Council of Governments

6. Draft Statement to CEQ - 20 January 1972.
Final Statement to CEQ - _____.

LITTLE RIVER INLET
NORTH CAROLINA AND SOUTH CAROLINA
NAVIGATION IMPROVEMENTS

ENVIRONMENTAL STATEMENT

1. Project Description. Little River rises in Little River Swamp, flows generally east, parallel to the coast, and enters the Atlantic Ocean. Little River Inlet is a natural opening through the barrier beach at the state line between North Carolina and South Carolina. The inlet provides an ocean entrance to the Atlantic Intracoastal Waterway and to several small tidal streams in the Little River - Calabash estuarine area. The nearest cities are Myrtle Beach, South Carolina, 25 highway miles to the south, and Wilmington, North Carolina, 50 miles to the north. Controlling depth is presently estimated to be three (3) feet with usable channel width varying between 80 and 120 feet.

The proposed project, designed to provide a deeper, stable channel through the inlet bars to the ocean consists of an entrance channel 300 feet wide and 12 feet deep extending from that depth in the Atlantic Ocean through the outer bar, a distance of 3,200 feet; an inner channel, 90 feet wide and 10 feet deep from the entrance channel to the Atlantic Intracoastal Waterway, a distance of 9,100 feet; a jetty on the north side of the inlet approximately 3,200 feet long; a jetty on the south side of the inlet approximately 3,000 feet long; and sand transition dikes connecting the jetties to the shore. Approximately 1,141,000 cubic yards of dredged sandy material will be removed during initial construction. This material will be utilized in building the sand transition dikes. Dredged material removed during maintenance operations will be utilized for nourishment of adjacent beaches. If feasible, sand will be stockpiled on the adjacent beach and subsequently positioned along the sand dike alignment with bulldozers, pans, or similar equipment. Approximately forty acres of sandy-type bottom will be dredged and the characteristics changed from a fairly shallow water area to a 10- to 12-foot channel depth. The benefits-to-cost ratio of the recommended improvement is 1.5 to 1.

2. Environmental Setting Without the Project. Little River Inlet is part of the "Grand Strand", a rapidly growing national resort area and South Carolina's most popular vacation spot. The "Strand" consists of 50 miles of resort beaches along South Carolina's northeast shore. The population of the area in 1967 was estimated to be about 27,000 permanent residents with about 175,000 tourists visiting the area during the busy summer weekends. The attractiveness of the "Grand Strand" is attributed in part to wide, sandy beaches, a variety of fishing opportunities, inlet and ocean boating waters, mild climate, and resort and camping-type accommodations.

83-941 O-72——7

The North and South Carolina Coastal Plain in the vicinity of Little River Inlet consists of sands, clays, marls, and limestones. The material forming the beach face consists chiefly of silica sands with an abundance of shell fragments. The underlying formation in the vicinity of Little River Inlet is the Pee Dee of Cretaceous period. During the Pleistocene epoch there were repated changes in sea level due chiefly to the enlargement and shrinkage of the ice caps and glaciers. The sea invasion now going on is due partly to a slow rise in sea level, but mostly to erosion by storm waves, long shore currents and tidal currents.

The principle difficulties result from inadequate depths across the ocean and inner bars and continual shifting of the bar channel. Channel alignment shifts os rapidly and so often that it is difficult for the Coast Guard to maintain channel markers in proper positions. During periods of low tide or high sea swells, the bars are extremely hazardous, and at times, impassable.

3. The Environmental Impact of the Proposed Action. The major environmental impact will be that of latering the hydrology of Little River Inlet to substantially imprve navigability and allow the safe operation of charter, recreation and commercial fishing boats. The stabilized inlet will serve as access to a harbor of refuge, possibly preventing loss of life and damage to boats during storms. Commercial fishermen will no longer experience delays going out nor will they have to return early to avail themselves of a favorable tide. The income of boat owners and of those who man these boats should increase due to their being able to fish for longer periods of time each day. More work should be available at packing houses, and with an estimated increase in the number of boats in the area, boat building and marine repair income may also increase. A major portion of the monies earned by the fisheries industry may be spent locally thereby impacting favorably on the community's economy.

The impact on the "Grand Strand", which is South Carolina's most popular vacation spot, should be favorable. Recreational boating enthusiasts will be able to utilize the stable inlet for access to the Inland Waterway and the improved navigability will not only increase access to existing recreation areas but also add to their effectiveness. Rough, underwater portions of rubblestone jetties will provide surfaces for attachment of marine organisms which will attract finfish; rough rubblestone voids will afford protection for certain smaller species of fish and the net effect will be the concentration of fishery resources around the jetties leading to an increase in the recreational fishing potential of the area. The project will afford increased accessibility to both commercial and sport fish species. Following initial construction, material removed by maintenance dredging of the project will be utilized to nourish adjacent beaches.

If any material unsuitable for sand dike construction and beach nourishment is placed in the existing Atlantic Intracoastal Waterway disposal areas, it could result in increased mosquito breeding habitat. This possibility will be avoided by placing such material in a manner not to block natural drainage and by shaping of the material to eliminate standing water.

4. Any Adverse Environmental Effects Which Cannot Be Avoided. A minor adverse impact upon the marine life and fish habitat will take place in the channel as a result of the dredging but the impact, if any, will be temporary. This stems from the increased level of turbidity which will take place during the dredging process and from the reshaping during construction of side slopes which support shellfish resources. During construction of the sand dikes, a toe dike will be maintained ahead of material placement to prevent direct runback and a resulting significant increase in turbidity.

5. Alternatives to the Proposed Action. An alternative of "no action" may lead to the abandonment of Little River Inlet for all boating except small craft which could negotiate the shallow depth across the bar during fair weather. Charter boats and commercial fishing boats would have to move to the nearest improved harbor which is Cape Fear River, 32 miles northeast of Little River Inlet. Lives and property of those continuing to use the inlet would be endangered because of the hazardous bars and lack of a harbor of refuge. The loss of the commercial fishing industry would adversely effect the local economy since it is a major source of income of the residents. Since coordination of the recommended plan has not surfaced any significant environmental conflict, there is no basis for giving the "no action" alternative any serious consideration.

Nonstructural controls, primarily dredging, attempted under emergency conditions, proved to be uneconomical and physically infeasible.

It was determined that structural control of the inlet was the only solution to the problem. Various types of jetties, sand by-pass facilities and dikes were considered. The plan recommended represents a sound engineering solution to present problems as well as to future problems which would develop in the absence of the project.

6. The Relationship Between Short-Term Uses of Man's Environment and Maintenance and Enhancement of Long Term Productivity. This proposal is designed to make a permanent but minor change in the geographic makeup of Little River Inlet by dredging and construction of sufficient dikes and jetties to permanently establish a maintainable channel. While the proposed project will have a limited and temporary adverse effect on fishery habitat as discussed in paragraph 4, it is expected that the final effects will be a productive habitat in the vicinity of the jetties, an abundant and accessible fishery, and an improved standard of living for local residents. Any adverse environmental impact incurred by the fishery resources are believed to be more than offset by the short and long-term gains when the proposed improvement becomes a reality.

7. Any Irreversible or Irretrievable Commitments of Resources Which Would Be Involved in the Proposed Action. The proposed plan requires the construction of a channel and protective works in an existing inlet and the necessary maintenance dredging of the channel. The only commitment is the labor and materials necessary to construct and maintain the project. Approximately forty acres of shallow water will be converted to somewhat deeper water as a result of increasing the channel depth.

8. Coordination of Plan. During the planning process, the proposed plan of improvement was coordinated with interested Federal and State agencies and other civic interests. Their initial comments were incorporated into the final plan.

Following completion of the final plan, a draft environmental statement was prepared and forwarded to the agencies on the attached list for comments on the environmental aspects of the proposed project.

In response to this coordination, the following comments were received:

The U. S. Department of Interior - National Park Service commented that no known potential units of the National Park System or historical and natural landmarks would be effected by the project.

The U. S. Department of Interior - FWPCA commented that they did not expect the project to have a significant effect on water quality in the project area.

The U. S. Department of Interior - BOR had no comments to offer.

The U. S. Department of Interior - Fish and Wildlife Service concurred with the report.

The Environmental Protection Agency - Office of Water Programs commented that they did not foresee any significant adverse environmental effects.

The U. S. Department of Commerce - National Marine Fisheries Service has no objections to the project, as planned.

77

The South Carolina Water Resources Commission had no comments to offer.

The North Carolina Department of Water and Air Resources furnished two comments on the method of construction. Their comments have been incorporated into this statement.

The South Carolina State Board of Health commented that the disposal area proposed for use in the placement of unsuitable construction material removed from the channel provides an excellent breeding area for salt marsh mosquitos and that if silt is continually pumped into the area, this condition will prevail. They recommended that sand be pumped into the area to eliminate the mosquito breeding problem. There is a definite possibility that this can be done. As mentioned in paragraph 3, the good sand removed during construction of the channel will be used to construct the sand dikes and for beach nourishment. Any additional sand not needed and that sand found unsuitable for

construction purposes will be placed in the disposal area. In addition, sand material removed during future maintenance dredging operations, not needed for nourishment of adjacent beaches, will be placed in the disposal area. This should reduce considerably the breeding of mosquitos in the area. A similar comment was received from the North Carolina Department of Air and Water Resources.

Comment: S. C. Marine Resources recommended that a statement concerning the estimated time or season of dredging be included with the opinion that all dredging should be conducted during the months of November- January to insure against possible damages to the larvae recruitments in this area.

Response: It may not be possible to complete all dredging within this three-month time span. However, if the project is authorized, construction will be scheduled so that as much of the work as is practicable can be accomplished during this time of year.

Comment: SPCA water quality records indicate that the water in the IWW does not need State standards. We have no data with which to predict whether greater amounts of this inferior water would emerge from the proposed cut (jetty) and possibly cause problems along nearby beaches.

Response: There is no reason to believe that a jettied inlet would increase the pollution on nearby beaches. If anything, the somewhat greater discharge vlocity, and the fact that the jetty will carry pollutants slightly farther to sea before their dispersal to nearby beaches means there may be less reason to worry about pollutants than presently.

At present, pollutants emerging from Little River Inlet are immediately dispersed in the breaker zone and conveyed downshore by the littoral currents. EPA ran dye tests in the AIWW in May 1972, tracing movements of dye placed in the AIWW near Myrtle Beach from that point through Little River Inlet. The EPA laboratory in Athens, Georgia is now preparing a report on this study. In July and August 1972 EPA plans to make further tests, to include fecal coliform and total coliform counts on beaches near Little River Inlet. These studies should give more definite information on pollution reaching beaches through Little River Inlet and will be available for analysis during post authorization planning.

Environmental Protection Agency, Region 4:

Comment: Fish processing houses and marinas could spring up in the area, and the EPA stated that adequate safeguards should be included in the project to prevent pollution from fish wastes, marine toilets, fuesl, solid wastes, garbage, bilge and other dischares.

Response: Control of pollution arising from sources enumerated is the responsibility of EPA and the State agencies charged with responsibility to promulgate and enforce water quality standards. The Corps of Engineers has

no jurisdiction over such matters, and at any rate these potential problems could not be resolved by survey scope planning for a navigation improvement of this nature.

Comment: Increased population, tourism and commercialization due to and associated with construction will likely increase solid wastes, and project personnel should discuss these increases with appropriate State and local authorities so they may be incorporated into solid waste management planning.

Response: In the event the project is authorized and funded for construction, coordination will be maintained with appropriate State and local officials concerned with all aspects of pollution abatement.

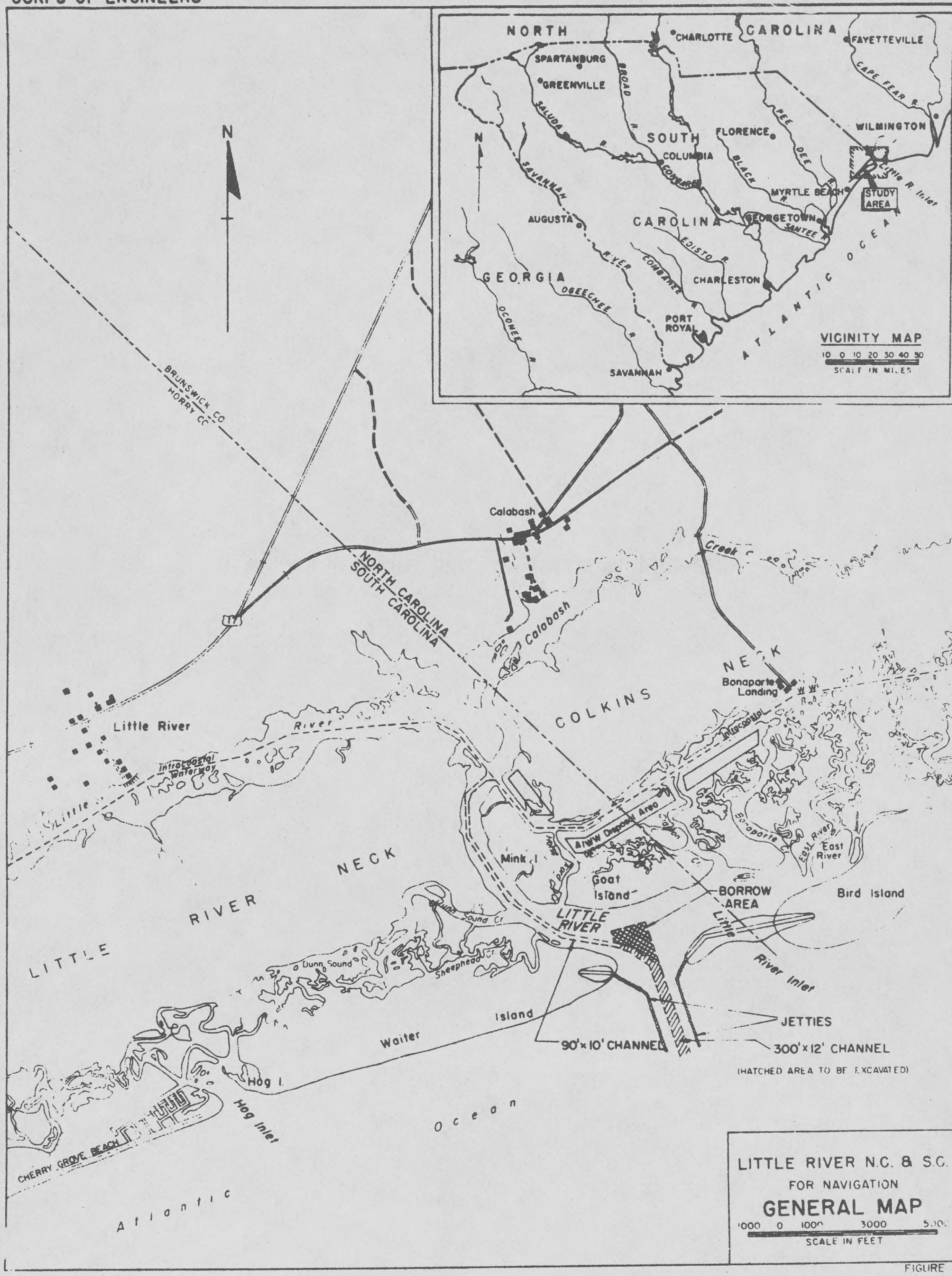

NORTH CAROLINA
CHARLOTTE
FAYETTEVILLE
SPARTANBURG
GREENVILLE
BROAD R.
SALUDA R.
CAPE FEAR R.
WILMINGTON
SOUTH CAROLINA
FLORENCE
COLUMBIA
PEE DEE R.
BLACK R.
CONGAREE R.
MYRTLE BEACH
Little R. Inlet
STUDY AREA
SAVANNAH RIVER
AUGUSTA
GEORGETOWN
SANTEE R.
EDISTO R.
COMBAHEE R.
CHARLESTON
GEORGIA
OGEECHEE R.
OCONEE R.
PORT ROYAL
SAVANNAH
ATLANTIC OCEAN
VICINITY MAP
10 0 10 20 30 40 50
SCALE IN MILES
N
BRUNSWICK CO
HORRY CO
Calabash
Creek
NORTH CAROLINA
SOUTH CAROLINA
Calabash
NECK
Bonaparte Landing
Little River
River
Intracoastal Waterway
COLKINS
Little
AIWW Disposal Area
Mink I.
Goat Island
Bonaparte
East River
East River
BORROW AREA
Bird Island
LITTLE RIVER NECK
LITTLE RIVER
Little River Inlet
Dunn Sound Cr.
Dunn Sound
Sheephead Cr.
Waiter Island
JETTIES
90'x10' CHANNEL
300'x12' CHANNEL
(HATCHED AREA TO BE EXCAVATED)
Hog I.
Hog Inlet
Ocean
CHERRY GROVE BEACH
Atlantic
LITTLE RIVER N.C. & S.C.
FOR NAVIGATION
GENERAL MAP
1000 0 1000 3000 5000
SCALE IN FEET

FIGURE 2

COMMENTS RECEIVED BY THE DISTRICT ENGINEER

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
SOUTHEAST REGION
RICHMOND, VIRGINIA 23240

In reply refer to
L7423 SER(CP)

May 11, 1971

Col. Burke W. Lee, District Engineer
Charleston District
Corps of Engineers
P. O. Box 919
Charleston, South Carolina 29402

Dear Sir:

Re: Draft Environmental Statement
Little River Inlet, North Carolina & South Carolina
Charleston District, Corps of Engineers

We have reviewed the Draft Environmental Impact Statement for the project described above attached to your letter of April 29, 1971.

This statement has been reviewed in sufficient depth to determine what effect this project might have on the following:

	Will affect	Will not affect
Existing units of the National Park System	____	x
Known potential units of the National Park System	____	x
Natural Landmarks registered or eligible for registration	____	x
National Historic Landmarks registered or eligible for registration	____	x

National Register of Historic Places: The environmental statement should show evidence of consultation with the State Liaison Officer appointed by the Governor (see Enclosure, Note 1) for possible National Register properties that may exist in the area. These include all Register properties of state and local significance, as well as Registered National Historic Landmarks.

Archeological Resources: The environmental statement should recognize the possible effect of the project on archeological resources, indicating a survey has been made and giving the results thereof. (See Enclosure, Note 2, for appropriate official to contact in the state.)

If we may be of further assistance please let us know.

Sincerely yours,

L. Boyd Finch

Assistant Director
Southeast Region

Enclosure

UNITED STATES
DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION
Middle Atlantic Region
918 Emmet Street
Charlottesville, Virginia 22901

October 12, 1970

Colonel Burke W. Lee
District Engineer
U. S. Army Corps of Engineers
Charleston District
P. O. Box 919
Charleston, South Carolina 29402

Dear Colonel Lee:

In response to your letter of September 29, 1970, we have reviewed the proposed plan of development for Little River Inlet, North Carolina and South Carolina, with a view toward determining the impact of this project on the aquatic environment.

This is to advise you that proposed dredging is not expected to have a significant effect on water quality in the project area.

Sincerely yours,

J. Gary Gardner
Director, Operations Office

United States Department of the Interior
BUREAU OF OUTDOOR RECREATION
SOUTHEAST REGIONAL OFFICE
810 New Walton Building
Atlanta, Georgia 30303

IN REPLY REFER TO:

May 5, 1971

D6427

Colonel Burke W. Lee
District Engineer
U.S. Army Engineer District,
Charleston
Post Office Box 919
Charleston, South Carolina 29402

Dear Colonel Lee:

Thank you for your draft environmental statement of April 29, 1971, on Little River Inlet, North Carolina, and South Carolina.

We have reviewed the draft environmental statement and have no comments to offer at this time.

Sincerely yours,

Roy K. Wood
Regional Director

United States Department of the Interior
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
PEACHTREE-SEVENTH BUILDING
ATLANTA, GEORGIA 30323

August 12, 1971

District Engineer
U.S. Army, Corps of Engineers
P.O. Box 919
Charleston, South Carolina 29402

Dear Sir:

We have reviewed the draft environmental statement on Little River Inlet, North Carolina and South Carolina, as requested in your letter of April 29, 1971. This statement generally reflects the effects of the project on fish and wildlife resources.

Thank you for the opportunity to comment on this draft.

Sincerely yours,

Ernest C. Martin
Acting Regional Director

ENVIRONMENTAL PROTECTION AGENCY
Office of Water Programs
Region III
918 Emmet Street
Charlottesville, Virginia 22901

August 19, 1971

Colonel Burke W. Lee
District Engineer
Charleston District
Corps of Engineers
P. O. Box 919
Charleston, South Carolina 29402

Dear Colonel Lee:

This is in response to your SANGC-R letter which transmitted a Draft Environmental Impact Statement (EIS) for the proposed Little River Inlet navigation project in North Carolina and South Carolina.

Based on data contained in the EIS, we have no additional comments to offer other than that presented in our October 12, 1970 correspondence to you, and we do not foresee any significant adverse environmental effects under present EPA responsibilities should the project be undertaken.

Thank you for the opportunity to review this NEPA report. We would appreciate a copy of the Final EIS for our files and future reference.

Sincerely yours,

J. Gary Gardner

J. Gary Gardner, Director
Operations Office

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Regional Office, Region 2
Federal Building
144 First Avenue South
St. Petersburg, Florida 33701

May 20, 1971

Colonel Burke W. Lee
U. S. Army Corps of Engineers
Post Office Box 919
Charleston, S. C. 29402

Dear Colonel Lee:

Reference is made to your letter dated 29 April 1971 requesting our review and comments on your Draft Environmental Impact Statement for Little River Inlet Project, North and South Carolina.

We have reviewed this statement and have no objections to the project, as planned.

Sincerely,

James R. Hartley
Acting Regional Director

State of South Carolina
Water Resources Commission

Clair P. Guess, Jr.
Executive Director

May 11, 1971

Colonel Burke W. Lee
District Engineer
Charleston District
Corps of Engineers
P. O. Box 919
Charleston, S. C. 29402

Dear Colonel Lee:

This is to advise that we have reviewed the environmental statement in connection with the Little River Inlet Project and have no comment.

With kind regards,

Sincerely,

James L. Aull
Assistant Director

JLA:fw

STATE OF NORTH CAROLINA
DEPARTMENT OF WATER AND AIR RESOURCES

GEORGE E. PICKETT, Director
Telephone 829-3003
E. C. HUBBARD, Asst. Director
Telephone 829 3006
RALEIGH, N. C. 27611
P. O. Box 27048

WS 71 RJBP

May 5, 1971

Colonel Burke W. Lee
District Engineer
U. S. Army Engineer District, Charleston
Corps of Engineers
P. O. Box 919
Charleston, South Carolina 29402

Dear Colonel Lee:

This is in reply to your letter of April 29th, which enclosed the environmental statement for the Little River Inlet project. We had offered our comments in November for inclusion in the statement, and you ask for our additional comments on it in its completed form. We have two additional comments:

We suggest adding to paragraph 3: "Construction of the project could result in increased mosquito-breeding. This can be avoided if the spoil is placed in such a manner as not to block natural drainage, and the material is graded in such a manner as to eliminate pockets of standing water."

We suggest adding to paragraph 5: "The temporary turbidity would be significantly lessened if spoil materials used in construction of the sand dikes are stockpiled on the beach and subsequently positioned in the water by bulldozers or similar equipment."

The environmental statement includes other comments we have previously made. With the two additions cited above, the State of North Carolina concurs in it.

Sincerely,

George E. Pickett

George E. Pickett

cc: Dr. Thomas L. Linton
Mr. Marshall Staton

South Carolina State Board of Health

J. MARION SIMS BUILDING

COLUMBIA 29201

E. KENNETH AYCOCK, M.D., M.P.H.
SECRETARY AND STATE HEALTH OFFICER

May 5, 1971

Burke W. Lee, Colonel
Department of the Army
Charleston District
Corps of Engineers
Post Office Box 919
Charleston, South Carolina 29402

Re: Navigation Improvements to
Little River Inlet

Dear Colonel Lee:

Enclosed are copies of correspondence from our field personnel reflecting their views with regard to the above referenced project.

These views may be considered the official opinion of this department.

Very truly yours,

John E. Jenkins, Chief
Bureau of Environmental Engineering

JEJ:gks

cc: Mr. Clair Guess, Executive Director, Water Resources Commission

Enclosures

83-941 O-72——8

South Carolina State Board of Health

J. MARION SIMS BUILDING

COLUMBIA 29201

E. KENNETH AYCOCK, M.D., M.P.H.

SECRETARY AND STATE HEALTH OFFICER

May 4, 1971

MEMORANDUM

To: Mr. Frank T. Arnold, Jr., Med. Entomologist
Environmental Sanitation
Vector Control Section
State Health Department of S. C.
Columbia, South Carolina

From: Floyd Harris, Entomologist
Environmental Sanitation
Vector Control Section
State Health Department of S. C.

Subject: Spoil Area in Horry County on the Intercoastal Water-Way Between Horse Ford and Clayton Creek and its Potential as a Breeding Area for Salt Marsh Mosquitos

This spoil area has been inspected and found to be typical of many spoil areas formed from silt. It is presently partially dried and extensively cracked with cracks as deep as 12 inches. The cracked condition provides an excellent breeding area for salt marsh mosquitos. Mosquitos breeding on this spoil area can easily fly to nearby communities and presents a health hazard.

If sand is pumped into the present designated spoil area it will not present a problem mosquito breeding area. However, if silt is pumped into the area it will present problems with mosquitos as it is at the present time.

skb

South Carolina State Board of Health

J. MARION SIMS BUILDING
COLUMBIA 29201

E. KENNETH AYCOCK, M.D.
SECRETARY AND STATE HEALTH OFFICER

Star Route 2
Myrtle Beach, S. C. 29577

April 30, 1971

Mr. John E. Jenkins, Chief
Bureau of Environmental Engineering
S. C. State Board of Health
Columbia, South Carolina 29201

Re: Navigation Improvements to Little River Inlet by Army Corps of Engineers

Dear Mr. Jenkins:

The intended spoil area for the above named project was inspected by Mr. Floyd Harris, State Entomologist, Mr. John Bunch, Shellfish Inspector, and myself on Friday, April 30, 1971.

The spoil area seems to provide ideal conditions for mosquito breeding, and in the opinion of Mr. Harris could result in a potential health hazard.

A copy of Mr. Harris's report is enclosed for you reference.

Very truly yours,

Ron H. Tata
District Engineer for
the Waccamaw District

RHT/el

Enclosure

cc: Mr. W. E. Gore, Jr.
Mr. C. B. Parnell
Mr. Floyd Harris
Mr. A. B. Allsbrook

CAPE FEAR COUNCIL OF GOVERNMENTS

ROOM 509-510 CP&L BUILDING
WILMINGTON, N. C. 28401

March 24, 1972

Office of District Engineers
U. S. Army Corps of Engineers
P. O. Box 905
Charleston, South Carolina 29402

Gentlemen:

RE: Little River Inlet
North Carolina and South Carolina

The Cape Fear Council of Governments has completed its review of the above referenced project. This project is in conformance with regional goals and objectives and is not in conflict with any planned programs. We recommend favorable consideration of this project by the Office of the Chief of Engineers, Department of the Army.

We are somewhat concerned, however, about the possibilities of increased mosquito-breeding. We recommend that the spoil be placed in such a manner as not to block natural drainage, and the material graded in such a manner as to eliminate pockets of standing water.

This letter conveys the official Regional Clearinghouse comments to accompany your application.

Sincerely,

Beverly P. Paul

Beverly P. Paul
Executive Director

BPP/aes

cc: Mr. Randolph Hendricks
Clearinghouse & Information Center, Raleigh

STATE OF SOUTH CAROLINA

Office of The Governor

Columbia 29201

March 28, 1972

Division of Administration

JOHN C. WEST
GOVERNOR

Wade Hampton Building
Phone (803) 758-2946

Mr. Arthur P. Crouse, Jr., Acting Chief
Engineering Division
Department of the Army
Charleston District, Corps of Engineers
Post Office Box 919
Charleston, South Carolina 29402

Dear Mr. Crouse:

In accordance with the procedures set forth in OMB Circular A-95, the following agencies have been afforded the opportunity to review and comment on the Draft Environmental Impact Statement for Little River Inlet, North and South Carolinas: Parks, Recreation and Tourism, Marine Resources, Department of Archives and History, Pollution Control Authority, Water Resources Commission, State Board of Health, Highway Department, Development Board, Office of Planning, Division of Administration, and Waccamaw Regional Planning and Development Council. Comments have been received from Marine Resources, Pollution Control Authority, State Board of Health, and Parks, Recreation and Tourism. The latter two had no change from their previous comment. Marine Resources recommended that a statement concerning the estimated time or season of dredging be included with the opinion that all dredging should be conducted during the months of November - January to ensure against possible damages to the postlarval shrimp recruitments in this area. The Pollution Control Authority commented that there is no data in the Statement with which to predict whether greater amounts of the water of the Intracoastal Waterway, which does not meet State standards, would emerge from the proposed cut and possible cause problems along nearby beaches. These comments are enclosed.

I do hope that these comments will be taken into consideration and that this office will be furnished a copy of the final statement.

Sincerely,

Elmer C. Whitten, Jr.

Elmer C. Whitten, Jr.
Program Coordinator

ECWjr/bf
Enclosures (4)

South Carolina
Project Notification & Review System

State Application Identifier

CLEARINGHOUSE USE ONLY
CONTROL NUMBER

DIST.	NO	FY
08	2001	2

SUSPENSE DATE
March 22

PROJECT NOTIFICATION REFERRAL

TO: Mr. S. J. Ulmer
State Board of Health

Also Referred To:
(see reverse Side)

The attached project notification describing a contemplated application for federal assistance is being referred to your agency for review and comments. If further information is required you are strongly urged to telephone the Project Contact named on the notification form. Please provide your agency's comments in the space below and return not later than the above suspense date to the State Planning and Grants Division, Wade Hampton Office Building, Columbia, South Carolina 29201 (758-2946)

For State Clearinghouse

Signature Elmer C. Whitten Jr.

Name [redacted].

RESULTS OF AGENCY REVIEW

☐ AGENCY HAS NO COMMENTS

☐ AGENCY REQUESTS CONFERENCE PRIOR TO MAKING COMMENTS

☒ AGENCY COMMENTS ON CONTEMPLATED APPLICATION AS FOLLOWS:

(Pursuant to section 102 (2) (C) of the National Environmental Policy Act of 1969, state agencies which are authorized to develop and enforce environmental standards are to be afforded the opportunity to review and comment on requests for federal assistance for projects which might have environmental significance. Typical considerations include, but are not limited to the following: effect on ambient noise level, on areas of unique interest or scenic beauty, on important recreational areas, on patterns of behavior for species, on wildlife breading, nesting, or feeding grounds, on air or water quality, on the water table of an area, etc. If possible, address comments to these considerations)

No further comments necessary

RECEIVED
MAR 14 1972
STATE PLANNING & GRANTS DIV.

(Use reverse side or separate continuation sheets if necessary)

FOR THE REVIEWING AGENCY:
SIGNATURE: [signature]

DATE: March 13, 1972

TITLE: Director, OCHP

TELEPNONE: 758-5537

SPGD Form 7A - 7/71

South Carolina
Project Notification & Review System

State Application Identifier

CLEARINGHOUSE USE ONLY
CONTROL NUMBER

DIST.	NO	FY
0 8	2 0 0 1	2

SUSPENSE DATE
March 22

PROJECT NOTIFICATION REFERRAL

TO: Mr. W. K. Marsh
Parks, Recreation and Tourism
P. O. Box 1358
Columbia, S. C.

Also Referred To:
(see reverse side)

The attached project notification describing a contemplated application for federal assistance is being referred to your agency for review and comments. If further information is required you are strongly urged to telephone the Project Contact named on the notification form. Please provide your agency's comments in the space below and return not later than the above suspense date to the State Planning and Grants Division, Wade Hampton Office Building, Columbia, South Carolina 29201 (758-2946)

For State Clearinghouse

Signature Elmer C. Whitten Jr.

Name [redacted]

RESULTS OF AGENCY REVIEW

☐ AGENCY HAS NO COMMENTS

☐ AGENCY REQUESTS CONFERENCE PRIOR TO MAKING COMMENTS

☒ AGENCY COMMENTS ON CONTEMPLATED APPLICATION AS FOLLOWS:

RECEIVED
MAR 9 1972
PLANNING & DEVELOPMENT

(Pursuant to section 102 (2) (C) of the National Environmental Policy Act of 1969, state agencies which are authorized to develop and enforce environmental standards are to be afforded the opportunity to review and comment on requests for federal assistance for projects which might have environmental significance. Typical considerations include, but are not limited to the following: effect on ambient noise level, on areas of unique interest or scenic beauty, on important recreational areas, on patterns of behavior for species, on wildlife breading, nesting, or feeding grounds, on air or water quality, on the water table of an area, etc. If possible, address comments to these considerations)

No change in our previous comment

RECEIVED
MAR 14 1972
STATE
GR...

(Use reverse side or separate continuation sheets if necessary)

FOR THE REVIEWING AGENCY:
SIGNATURE: Maxwell M. Way, Jr. DATE: 13 March 72
TITLE: Economist TELEPNONE: 758-2863

SPGD Form 7A - 7/71

South Carolina
Project Notification & Review System

State Application Identifier

CLEARINGHOUSE USE ONLY
CONTROL NUMBER
DIST. 08 NO 2001 FY 2

SUSPENSE DATE
March 22

PROJECT NOTIFICATION REFERRAL

TO: Mr. Charles Bearden
Marine Resources
2024 Maybank Highway
Charleston, S. C. 29407

Also Referred To:
(see reverse side)

The attached project notification describing a contemplated application for federal assistance is being referred to your agency for review and comments. If further information is required you are strongly urged to telephone the Project Contact named on the notification form. Please provide your agency's comments in the space below and return not later than the above suspense date to the State Planning and Grants Division, Wade Hampton Office Building, Columbia, South Carolina 29201 (758-2946)

For State Clearinghouse

Signature Elmer C. Whitaker

Name ~~A. W. Bloodworth, Jr.~~

RESULTS OF AGENCY REVIEW

☐ AGENCY HAS NO COMMENTS

☐ AGENCY REQUESTS CONFERENCE PRIOR TO MAKING COMMENTS

☒ AGENCY COMMENTS ON CONTEMPLATED APPLICATION AS FOLLOWS:

(Pursuant to section 102 (2) (C) of the National Environmental Policy Act of 1969, state agencies which are authorized to develop and enforce environmental standards are to be afforded the opportunity to review and comment on requests for federal assistance for projects which might have environmental significance. Typical considerations include, but are not limited to the following: effect on ambient noise level, on areas of unique interest or scenic beauty, on important recreational areas, on patterns of behavior for species, on wildlife breading, nesting, or feeding grounds, on air or water quality, on the water table of an area, etc. If possible, address comments to these considerations)

This Office has reviewed the EIS and would like to recommend that the following be added under Project Description: a statement concerning the estimated time or season of dredging. It is our opinion that all dredging should be conducted during the months of November - January to ensure against possible damages to the postlarval shrimp recruitments in this area.

(Use reverse side or separate continuation sheets if necessary)

FOR THE REVIEWING AGENCY:
SIGNATURE: Charles M. Bearden DATE: 3-14-72
TITLE: Chief - BMCMS TELEPNONE: 556-3710

SPGD Form 7A - 7/71

South Carolina
Project Notification & Review System

Lowcountry

State Application Identifier

CLEARINGHOUSE USE ONLY
CONTROL NUMBER

DIST.	NO	FY
0 8	2 0 0 1	2

SUSPENSE DATE
March 22

PROJECT NOTIFICATION REFERRAL

Pollution Control Authority

TO:

Also Referred To:

(see reverse side)

The attached project notification describing a contemplated application for federal assistance is being referred to your agency for review and comments. If further information is required you are strongly urged to telephone the Project Contact named on the notification form. Please provide your agency's comments in the space below and return not later than the above suspense date to the State Planning and Grants Division, Wade Hampton Office Building, Columbia, South Carolina 29201 (758-2846)

For State Clearinghouse

Signature Elmer C. Whitten V

Name [redacted]

RESULTS OF AGENCY REVIEW

☐ AGENCY HAS NO COMMENTS

☐ AGENCY REQUESTS CONFERENCE PRIOR TO MAKING COMMENTS

☒ AGENCY COMMENTS ON CONTEMPLATED APPLICATION AS FOLLOWS:

(Pursuant to section 102 (2) (C) of the National Environmental Policy Act of 1969, state agencies which are authorized to develop and enforce environmental standards are to be afforded the opportunity to review and comment on requests for federal assistance for projects which might have environmental significance. Typical considerations include, but are not limited to the following: effect on ambient noise level, on areas of unique interest or scenic beauty, on important recreational areas, on patterns of behavior for species, on wildlife breading, nesting, or feeding grounds, on air or water quality, on the water table of an area, etc. If possible, address comments to these considerations)

PCA water quality records indicate that the water in the Intracoastal Waterway does not meet State standards. We have no data with which to predict whether greater amounts of this inferior water would emerge from the proposed cut and possibly cause problems along nearby beaches.

(Use reverse side or separate continuation sheets if necessary)

FOR THE REVIEWING AGENCY:
SIGNATURE: W. E. Limehouse
DATE: Mar 22, 72
TITLE: Coordinator, Plans + Grants
TELEPNONE: 758-2966

SPGD Form 7A - 7/71

83-941 O-72——9

COMMENTS RECEIVED BY THE

CHIEF OF ENGINEERS

STATE OF NORTH CAROLINA
DEPARTMENT OF NATURAL AND ECONOMIC RESOURCES
Box 27687
Raleigh 27611

CHARLES W. BRADSHAW, JR.
SECRETARY

ROBERT W. SCOTT
GOVERNOR

Office of Water and Air Resources
GEORGE E. PICKETT, DIRECTOR
TELEPHONE 829-3003

WS 72 RJBP

March 28, 1972

Lt. General F. J. Clarke
Chief of Engineers
Department of the Army
Washington, D. C. 20314

Dear General Clarke:

This is in reply to General Rollins' letter of January 20, 1972, concerning Little River Inlet, North Carolina and South Carolina. He enclosed a copy of the proposed report of the Chief of Engineers on the project, along with a draft environmental statement. The environmental statement is being acted on by the State Clearinghouse of the Department of Administration, which will respond on it.

The State of North Carolina favors the project, and concurs in your proposed report. In earlier comments on the project we asked that spoil for the sand dike at the western end of Bird Island be stockpiled and dozed into place to minimize siltation, and that the work be done during the colder winter months to avoid interference with fishermen and to minimize adverse effects on the biological productivity of the area. These construction procedures have been included in your report in the form of my letter of June 29, 1970, as Exhibit I-5.

Because the project is on a State Line, the portion of the costs to be borne by the North Carolina State and local interests is not made clear in the report. We acknowledge the general finding of the cost-sharing, calculations, but actual commitments as to cost-sharing, including any for jetty fishing facilities, will have to await the break-down between States and the formalization of commitments by contract with the Secretary of the Army.

The opportunity to comment is appreciated.

Sincerely,

George E. Pickett

George E. Pickett

STATE OF NORTH CAROLINA
DEPARTMENT OF ADMINISTRATION

ROBERT W. SCOTT
GOVERNOR

W. L. TURNER
DIRECTOR

STATE PLANNING DIVISION
RONALD F. SCOTT
STATE PLANNING OFFICER

REPLY TO:
CLEARINGHOUSE AND INFORMATION CENTER
116 WEST JONES STREET
RALEIGH, N. C. 27603
(919) 829-4375

March 9, 1972

Major General A. P. Rollins, Jr.
Acting Chief of Engineers
Department of the Army
Office of the Chief of Engineers
Washington, D. C., 20314

Dear General Rollins:

Re: DAEN-CWP-D
Draft Environmental Statement,
Little River Inlet, N. C. and S.C.,
Navigation, Dated December 30, 1971

The subject draft environmental statement, transmitted by your letter of January 20, 1972 to the Director, North Carolina Department of Water and Air Resources, has been reviewed by appropriate State agencies.

We are enclosing herewith copies of the comments we have received from the Department of Natural and Economic Resources, the State Board of Health, the State Ports Authority, and the Marine Science Council. You will note that these comments contain no objections or suggestions for revisions of the statement.

Sincerely yours,

R. Hendricks

RANDOLPH HENDRICKS
Planning Coordinator

RH:pg
Enclosure
cc: Charleston District, Corps of Engineers

STATE OF NORTH CAROLINA
DEPARTMENT OF NATURAL AND ECONOMIC RESOURCES
Box 27687 Raleigh 27611

CHARLES W. BRADSHAW, JR.
SECRETARY
TELEPHONE
AREA CODE 919-829-4177

ROBERT W. SCOTT
GOVERNOR

March 7, 1972

MEMORANDUM

TO: Randolph Hendricks

FROM: A. W. Cooper

SUBJECT: Little River Inlet, North Carolina and South Carolina, Navigation Improvements, Corps of Engineers

This Department has carefully reviewed the subject draft statement and we are pleased to find that all of our suggestions have been included in the statement. We concur with the statement and support the project.

NORTH CAROLINA
STATE BOARD OF HEALTH
P. O. BOX 2091
RALEIGH, NORTH CAROLINA 27602

February 11, 1972

Mr. Randolph Hendricks
Planning Coordinator
Clearinghouse and Information Center
State Planning Division
Department of Administration
Raleigh, North Carolina 27602

Re: Draft Environmental Statement,
Little River Inlet (NC and SC),
Navigation Improvements

Dear Mr. Hendricks:

This refers to your memorandum, dated February 8, 1972, requesting comments on the draft of the Environmental Statement, prepared by the Corps of Engineers, for the Navigation Improvements Project, Little River Inlet, North Carolina and South Carolina.

Our staff has reviewed the draft statement and find that those problems with which we are primarily concerned have been recognized and measures proposed for minimizing the environmental impact.

We have no suggestions to offer for revision of the draft statement and consider it acceptable in its present form.

Very truly yours,

Marshall Staton

Marshall Staton, Director
Sanitary Engineering Division

cc: Mr. Gene Barrett

North Carolina State Ports Authority

James W. Davis, Executive Director
P. O. Box 3037 919-763-1621
Wilmington, N. C. 28401

February 17, 1972

Mr. Randolph Hendricks
Clearinghouse and Information Center
116 West Jones Street
Raleigh, North Carolina 27603

Dear Mr. Hendricks:

In response to your request by letter of February 8, 1972, the Draft Environmental Statement: Little River Inlet, North Carolina and South Carolina, Navigation Improvements, Corps of Engineers, has been reviewed.

This Authority takes no exception to the statement.

Sincerely yours,

James W. Davis

JWD:jmc

STATE OF NORTH CAROLINA
DEPARTMENT OF ADMINISTRATION
POST OFFICE BOX 1351
RALEIGH 27602

ROBERT W. SCOTT
GOVERNOR
W. L. TURNER
DIRECTOR

MARINE SCIENCE COUNCIL
ADDISON HEWLETT, JR., CHAIRMAN
E. WALTON JONES, VICE CHAIRMAN

JOHN T. PITTMAN
EXECUTIVE DIRECTOR

March 1, 1972

MEMORANDUM

TO: Randolph Hendricks

FROM: John T. Pittman

SUBJECT: Draft Environmental Statement: Little River Inlet, North Carolina and South Carolina, Navigation Improvements, Corps of Engineers.

The North Carolina Marine Science Council has no comments to offer.

JTP/dj

State of South Carolina
Water Resources Commission

Clair P. Guess, Jr.
Executive Director

February 7, 1972

Major General A. P. Rollins, USA
Acting Chief of Engineers
Department of the Army
Washington, D. C. 20314

Dear General Rollins:

This is in response to your letter, DAEN-CWP-D, dated 20 January 1972 relative to the proposed improvement on Little River Inlet, North Carolina and South Carolina. Also, the draft of the environmental statement regarding the same project.

The Water Resources Commission and other agencies of the State had occasion to offer comments in connection with the proposed project to the District Engineer during the development of his report and these comments are included in the report which is to be submitted to Congress. The comments submitted at that time are still applicable. We wish to urge that as much of the dredged material as possible be used as beach nourishment and that the use of the sediment disposal area be held to an absolute minimum.

A copy of a letter from the South Carolina Wildlife Resources Department expressing their views at this time is enclosed.

We trust that this proposed project will be approved by Congress without delay and that early implementation will be a reality.

Sincerely yours,

James L. Aull
Assistant Director

JLA:fw
Enclosure

South Carolina
WILDLIFE RESOURCES DEPARTMENT
POST OFFICE BOX 167 COLUMBIA, SOUTH CAROLINA 29202

• JAMES W. WEBB
EXECUTIVE DIRECTOR

• PAT RYAN
DIRECTOR, DIVISION
OF GAME AND
FRESHWATER FISHERIES

• DR. JAMES A. TIMMERMAN, JR.
DIRECTOR, DIVISION
MARINE RESOURCES

February 3, 1972

Mr. James L. Aull
S. C. Water Resources Commission
2414 Bull Street
Columbia, South Carolina 29201

Dear Mr. Aull:

Reference the draft of the environmental statement and the report as prepared by the Department of the Army, Office of Chief of Engineers, concerning the proposed Little River Inlet Project located on the boundary between North and South Carolina.

I have reviewed these documents and find the South Carolina Wildlife Resources Department has no further comments to make.

Thanking you for this opportunity for the review and the opportunity to make a response, I remain

Sincerely yours,

ROGER A. SEAMANS
Administrative Assistant

RAS/pal

Attachment

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
WASHINGTON, D.C. 20201

OFFICE OF THE SECRETARY

18 April 1972

A. P. Rollins, Jr.
Major General, USA
Acting Chief of Engineers
Washington, D. C. 20310

Dear Major General Rollins:

Secretary Richardson has asked me to respond to your letter dated January 20, 1972, wherein you requested comments on the proposed report and draft environmental impact statement for the Little River Inlet, North Carolina and South Carolina.

This Department has reviewed the health aspects of the above project as presented in the documents submitted. It has been noted that a potential exists for a mosquito breeding problem. However, if the requirements and regulations of State agencies are followed, this problem is not expected to develop.

The opportunity to review this proposed report and draft environmental impact statement is appreciated.

Sincerely yours,

Merlin K. DuVal, M.D.
Assistant Secretary for
Health and Scientific Affairs

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS:
U.S. COAST GUARD (WS)
400 SEVENTH STREET SW.
WASHINGTON, D.C. 20590
PHONE: 202-426-2262

14 March 1972

Lt. General F. J. Clarke
Chief of Engineers
Department of the Army
Washington, D. C. 20314

Dear General Clarke:

This is in response to Major General A. P. Rollins' letter of 20 January 1972 addressed to Secretary Volpe concerning the draft environmental impact statement and survey report for the navigation improvement project on the Little River Inlet, North Carolina and South Carolina.

The concerned operating administrations and staff of the Department of Transportation have reviewed the environmental statement and survey report and this Department has no comments to offer.

The Department of Transportation concurs with the project and finds no objection with the environmental impact statement.

The opportunity for this Department to review and comment on the Little River Inlet Project, North Carolina and South Carolina is appreciated.

Sincerely,

W. M. BENKERT
Rear Admiral, U. S. Coast Guard
Chief, Office of Marine Environment
and Systems

ENVIRONMENTAL PROTECTION AGENCY
REGION IV
1421 Peachtree St., N.E., Atlanta, Georgia 30309

April 11, 1972

General A. P. Rollins, Jr.
Acting Chief of Engineers
Department of the Army
Office of the Chief of Engineers
Washington, D. C. 20314

Dear General Rollins:

The Environmental Protection Agency's Region IV has reviewed the Draft Environmental Impact Statement on Little River Inlet (Navigation), North Carolina and South Carolina. Our comments are as follows:

The short-term effects that turbidity and silting from dredging operations would have on water quality are adequately covered. One possibility not covered, however, is the fact that fish processing houses and marinas could spring up in the area because of the accessibility of the new harbor to deep water. In this eventuality, positive steps should be taken to insure that the proposed project includes adequate safeguards to prevent pollution from fish wastes, marine toilet sources, fuel dispensing devices, garbage, bilge, and other discharges. Such safeguards are to include sewage disposal facilities designed in accordance with State and Federal standards to receive and dispose of fish wastes, wastes from boats, docks and shore-based facilities as required to prevent violation of water quality standards.

Consideration also should be given to waterway traffic solid waste disposal to prevent water pollution, health, and aesthetic problems. Plans of disposal procedure should be submitted to the affected States' solid waste management programs for approval (Solid Waste Program, Division of Environmental Sanitation, South Carolina State Board of Health, J. Marion Sims Building, 2600 Bull Street, Columbia, South Carolina and Solid Waste and Vector Control Section, Division of Sanitary Engineering, North Carolina State Board of Health, P. O. Box 2091, Raleigh, North Carolina 27602), and approval should be obtained before work on the project is started.

Also, influx of population and tourism and increased commercial-industrial activities due to and associated with construction will likely increase the load on existing solid waste collection and disposal facilities. Project personnel should discuss these increases with appropriate State and local authorities so they may be incorporated into solid waste management planning.

We would appreciate a copy of the Final Environmental Impact Statement when it is available. If we can be of help to you in any way, please call on us.

Sincerely,

Jack E. Ravan
Regional Administrator

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

13 June 1972

Dear General Clarke:

This is in reply to a letter from your office dated January 20, 1972, requesting our views and comments on a proposed report and environmental statement on the Little River Inlet, North Carolina and South Carolina.

The Department of the Interior has no objection to the authorization of this project. The plan of development does not adversely affect any project or program of the National Park Service. It will have very little effect on the fish and wildlife resources of the study area and the mineral resources and mineral related activities will not be adversely affected. The project should not adversely affect geologic or hydrologic conditions in the study area. The recreation plan is deemed adequate and it is in accord with the recreation plans of the States of North and South Carolina.

We have reviewed the environmental statement for this project and submit the following comments for your consideration and use in preparing the final statement.

Project Description - Paragraph 2 states that approximately 1.1 million yards of sandy material will be removed during construction and the material is to be used to build sand transition dikes and to nourish the adjacent beaches. In discussing the stockpiling of this material the statement says the material will be stored on the beach, if feasible. By qualifying the location of the stockpile the statement is weakened as it now should identify some alternative locations and assess the environmental consequences of using them.

We believe the statement should also indicate the frequency of maintenance dredging of the channel. Such information is needed to assess the disruptive effect of the dredging on the aquatic environment.

Environmental Setting - This section should be expanded to discuss all aspects of the existing environment and particular emphasis should be given to discussing those aspects of the existing environment which will be altered by the project. Broad coverage in this section will give an indication of the factors that were evaluated in the environmental assessment. For example, the section should describe the fishery resources in the study area and assess the importance of the existing aquatic environment which is to be dredged. With such information one can then assess the environmental impact of the dredging operation.

The section should provide a more informative discussion of the recreation development that now exists on Grand Strand. Present and future recreation capacity and use data would help in assessing if the increased recreation use induced by this project will enhance or degrade the resource base.

This section provides no insight as to whether historical or archeological values were considered. While we do not believe the project will impact on such values their recognition in the statement indicates that they were considered in the assessment.

Environmental Impacts - This section should identify the impact of increased recreational use of the Grand Strand. The impact of dredging on the fishery resource and the aquatic environment should be set forth. In assessing the impact of dredging due consideration should be given to the frequency of maintenance dredging also. We also believe the statement should assess the impact of project structures on beach erosion in the study area.

We wish to thank you for the opportunity to review the report and environmental statement for this project.

Sincerely yours,

Deputy Assistant Secretary of the Interior

Lt. Gen. F. J. Clarke
Chief of Engineers
Attn: DAEN-CWP-D
Department of the Army
Washington, D.C. 20314